

Rocky Flats Environmental Technology Site

MAN-076-FDPM
REVISION 1

FACILITY DISPOSITION PROGRAM MANUAL

APPROVED BY:

B. Mathis
Division Manager
D&D Projects & Construction
Kaiser-Hill Company, LLC

Brian Mathis
Print Name

9/8/99
Date

Effective Date: 09/24/99

CONCURRENCE BY THE FOLLOWING DISCIPLINES IS DOCUMENTED IN THE
PROCEDURE HISTORY FILE:

Kaiser-Hill Company, LLC

Closure Projects Integration
Environmental Systems & Stewardship
Quality Assurance
Nuclear Operations

Prime Subcontractors:

Rocky Flats Closure Site Services, L.L.C.
Rocky Mountain Remediation Services

USE CATEGORY 3

S/S/USQD Review: PRE-RFP-99.0200-RLD
ISR: Not Required

Reviewed for Classification / UCNI

By *K. Dore*

Date 9/8/99

This is a new manual.

Periodic review frequency: 3 years from effective date.

PADC-1999-00153



ADMIN RECORD

IA-A-000580

✓ 87

LIST OF EFFECTIVE PAGES

Pages Effective Date

1-222 9/24/99

Integrates Closure Project Standards Issued by Memo April 13, 1998

TABLE OF CONTENTS

<u>Section 1</u> – INTRODUCTION	5
<u>Section 2</u> – FACILITY DISPOSITION PROCESS	14
<u>Section 3</u> – SCOPING	39
<u>Section 4</u> – PHASE I – PLANNING	54
<u>Section 5</u> – PHASE II – PLANNING AND ENGINEERING	60
<u>Section 6</u> – PROJECT EXECUTION	69
<u>Section 7</u> – PROJECT CLOSE-OUT	80
<u>Section 8</u> – REFERENCES	87
<u>Section 9</u> – APPENDICES	88
<u>Appendix A</u>	
A-1 Generic D&D Project File Index and Completion Checklist	94
A-2 Project Deliverables Matrix	102
A-3 D&D Document Review Matrix	105
<u>Appendix B</u>	
B-1 Type 1 Facility Disposition Checklist	106
B-2 Listing of Facilities by "Anticipated" Type	107
<u>Appendix C</u>	
C-1 Project Execution Plan (PEP) Template	121
C-2 Waste Management Plan Guidance	159
C-3 Daily Construction Report	170
C-4 Monthly Personnel Resource Usage Report	171
C-5 Construction Progress Photographs	172
<u>Appendix D</u>	
D-1 Statement of Work	176
D-2 Instructions for Construction Subcontractor Pool Application and Application for Pre-Qualification, Subcontractor Evaluation	202
D-3 Decision Document Guidance	206
D-4 Decision Document Template	210
<u>Appendix E</u>	
E-1 Core Training Requirements D&D Worker	211

Appendix F

F-1 Partial And Complete Subcontract Close-Out Form.....	213
F-2 Project Beneficial Occupancy Notice	214
F-3 Project Acceptance And Transfer Form	215
F-4 Project Final Closeout Form (FPCO)	216

Appendix G

G-1 Glossary & Acronyms	217
-------------------------------	-----

1.0 INTRODUCTION

The Facility Disposition Program Manual (FDPM or Manual) establishes the requirements for planning and executing work based on regulations, agency agreements, consent orders, and Site infrastructure requirements for the disposition of facilities at the Rocky Flats Environmental Technology Site (RFETS or Site) in accordance with the Rocky Flats Cleanup Agreement (RFCA) and the Decommissioning Program Plan (DPP).

This Manual also provides guidance and requirements to Project Managers (PMs) for identifying and implementing the facility disposition requirements including Site requirements and provides implementation tools, e.g., templates, tables, process flow charts, checklists, etc., to aid the PMs in performing their duties.

1.1 APPLICABILITY AND USE

This Manual applies to all Site employees and subcontractors performing or supporting facility disposition work. The requirements in this manual **SHALL** be used for all facility disposition projects. Any changes or revisions to this manual **SHALL** be approved by the Kaiser-Hill Company, L.L.C. (K-H), Closure Projects Integration Division Manager for Decontamination and Decommissioning (D&D).

This Manual identifies mandatory elements and requirements by using the word "**SHALL**." Additionally, the manual uses the word "**Should**" to indicate a recommendation that is based on standards and good business practices. The word "**may**" is used when permission is granted rather than constituted as a requirement. Facility disposition activities that were initiated prior to the establishment of this manual **SHALL** obtain written exception from the requirements of this document, as appropriate, from the D&D Division Manager.

1.2 OVERVIEW

Table 1-1, Section Overview provides an overview of each of the chapters contained in this Manual and their corresponding appendices.

1.3 DEFINITIONS & ACRONYMS

All definitions and acronyms referred to throughout this manual are contained in Appendix H, Glossary. The following definitions, and the definitions provided in Appendix H, Glossary, apply to the facility disposition process at RFETS. The RFETS specific definitions provided in this Manual take precedence over definitions in the Rocky Flats Plant (RFP) Dictionary or other Level 1 Program Manuals.

Consistent with RFCA and the DPP, the FDPM follows the RFCA convention insofar as the term "building" may mean a building, portion thereof, structure, system or component.

Building Stabilization, as used for the facility disposition process at RFETS for deactivation activities in non-SNM buildings, means:

Table 1-1
SECTION OVERVIEW

Section Contents		Appendices
SECTION 1 INTRODUCTION	<ul style="list-style-type: none"> Manual Purpose, Applicability, Section Overview Responsibilities Records, References 	Appendix A A-1 Generic D&D Project File Index A-2 Project Deliverables Matrix A-3 D&D Document Review Matrix
SECTION 2 FACILITY DISPOSITION PROCESS	<ul style="list-style-type: none"> Overview of Regulatory Framework Overview of Facility Disposition (High Level Flow Chart) Overview of Planning Process Phases (All elements, and Key Process Element Descriptions (<i>Facility Type, Decision Document, Characterization Process, & PEP</i>)) Overview of Execution Phases for Facility Disposition 	Appendix B B-1 Type 1 Facility Disposition Checklist B-2 Listing of Facilities by "Anticipated" Type
SECTION 3 PROJECT INITIATION AND SCOPING	<ul style="list-style-type: none"> Scoping Elements Establishing the Project Team (<i>Roles & Responsibilities, Qualifications, Regulatory Interfaces</i>) Project Team Kick-off Scoping Characterization Joint Scoping Meeting w/LRA Initial Development of: Scoping PEP, Waste, AB, Contracting, RCRA Permitting, etc., Strategies Project Files & Administrative Records Preliminary Options Analysis 	Appendix C C-1 Project Execution Plan Template C-2 WMP Format C-3 Daily Construction Report C-4 Monthly Personnel Resource Usage Report C-5 Construction Progress Photographs
SECTION 4 PHASE I PLANNING	<ul style="list-style-type: none"> Reconnaissance Level Characterization (RLC) RLC Plan/Report, Review & Approval Cycles Options & Feasibility Studies Update to Strategies & Plans Engineering Studies & Assessments Update to PEP 	
SECTION 5 PHASE II PLANNING & ENGINEERING	<ul style="list-style-type: none"> Decision Document Requirements Authorization Basis IWCP & Engineering Design Packages Final PEP Other Planning Characterizations 	Appendix D D-1 Statement of Work D-2 Instructions for Subcontractor Pool Application D-3 Decision Document Guidance D-4 Decision Document Template
SECTION 6 EXECUTION	<ul style="list-style-type: none"> Readiness Determinations Training Requirements Physical Work Preparation & Site Preparation Dismantlement Activities In-Process Characterization, Final & Validation Surveys Demolition Transition to Environment Restoration Waste Management 	Appendix E E-1 Core Training Requirements D&D Worker
SECTION 7 PROJECT CLOSEOUT	<ul style="list-style-type: none"> Project Acceptance & Close-Out Documentation Standards Project Reporting Standards and Required Reports Division 1 Specifications Project Acceptance and Close-Out Tasks and Documentation (Beneficial Occupancy, Project Acceptance & Transfer) Final Project Closeout Report Lessons Learned 	Appendix F F-1 Partial & Complete Subcontract CloseOut Form F-2 Project Beneficial Occupancy Notice F-3 Project Acceptance And Transfer Form F-4 Project Final Closeout Form (FPCO)
SECTION 8 REFERENCES	<ul style="list-style-type: none"> References 	
SECTION 9 APPENDICES	<ul style="list-style-type: none"> Appendices (All above plus Appendix G) 	G-1 Glossary & Acronyms

6

These are activities necessary to remove a building from operation and place the building in a safe and stable condition so that the building and its contents are in a condition that eliminates or mitigates hazards and ensures adequate protection to workers, the public and the environment. Activities necessary to achieve and maintain building stabilization may include inventory and removal of hazardous materials from the facilities and immediate areas, such as regulated hazardous chemicals, beryllium, and gas cylinders, roof repairs over critical areas, asbestos abatement and/or encapsulation, and repack of existing waste crates in questionable condition.

Building stabilization is achieved when the facility is in a safe and stable condition while awaiting further disposition and/or decommissioning, dismantlement, and demolition.

Note: Building stabilization applies to non-nuclear buildings.

Deactivation, as defined in RFCA paragraph 25(y) means:

" . . . the process of placing a building, portion of a building, structure, system, or component (as used in the rest of this paragraph, "building") in a safe and stable condition to minimize the long-term cost of a surveillance and maintenance program in a manner that is protective of workers, the public, and the environment. Actions during deactivation could include the removal of fuel, draining and/or de-energizing of nonessential systems, removal of stored radiological and hazardous materials and related actions. As the bridge between operations and decommissioning, based upon Decommissioning Operations Plans or the Decommissioning Program Plan, deactivation can accomplish operations-like activities such as final process runs, and also decontamination activities aimed at placing the building in a safe and stable condition. Deactivation does not include decontamination necessary for the dismantlement and demolition phase of decommissioning, i.e., removal of contamination remaining in fixed structures and equipment after deactivation. Deactivation does not include removal of contaminated systems, system components, or equipment except for the purpose of accountability of Special Nuclear Material SNM and nuclear safety. It also does not include removal of contamination except as incidental to other deactivation or for the purposes of accountability of SNM and nuclear safety."

Note: Deactivation terminology applies to nuclear buildings.

The following are examples of potential end points for deactivation. Not all end points will apply in all buildings that go through a deactivation process:

- A determination that the probability of a criticality event in the building is considered not credible;
- Removal of all combustibles that are not integral parts of the building;
- Removal of all classified materials;
- A shift in primacy from Atomic Energy Act oversight of the Defense Nuclear Facility Safety Board (DNFSB) to Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) regulation through RFCA by the Environmental Protection Agency (EPA) and the Colorado Department of Public Health and Environment (CDPHE).

Activities such as waste chemical removal, disposition of excess property, chemical hazards reduction and placement of Resource Conservation and Recovery Act (RCRA) units into RCRA stable condition, or their closure, may occur either during deactivation or

decommissioning. The DPP has been clarified to allow the removal of fixed equipment and systems in buildings undergoing the disposition process. Fixed equipment and systems means those items that are attached to the floors or walls or ceiling of a building, but are not connected to building systems that could provide a pathway for contaminants to reach the environment. Fixed equipment that is connected to building systems may be removed in accordance with the DPP with agreement from DOE and the LRA. The DPP Section 1.1.5 outlines the requirements for removal of certain fixed equipment or systems.

Decommissioning, as defined in RFCA paragraph 25(z) means:

" . . . for those buildings, portions of buildings, structures, systems or components (as used in the rest of this paragraph, "building") in which deactivation occurs, all activities that occur after the deactivation. It includes surveillance, maintenance, decontamination and/or dismantlement for the purpose of retiring the building from service with adequate regard for the health and safety of workers and the public and protection of the environment. For those buildings in which no deactivation occurs, the term includes characterization as described in Attachment 9, surveillance, maintenance, decontamination and/or dismantlement for the purpose of retiring the building from service with adequate regard for the health and safety of workers and the public and protection of the environment. The ultimate goal of decommissioning is unrestricted use or, if unrestricted use is not feasible, restricted use of the buildings."

Disposition, as defined in RFCA Attachment 9, means:

" . . . the sequence of activities required to take a building/facility from its existing condition to its final disposition."

The term building/facility disposition is used to describe the entire building/facility disposition process. It includes removal of property, waste, chemicals, Special Nuclear Material (SNM), and holdup; stripout of fixed equipment; decontamination; demolition; waste removal or emplacement; and the characterization and planning necessary to support any or all of the above. Building/facility disposition is distinguished from landlord activities in that landlord activities are those that occur in order to keep a building in its current, operating condition. The primary planning document for the facility disposition process is the Project Execution Plan (PEP). Project Baseline Document (PBDs) are the documents by which Department of Energy (DOE) approves the annual work scope and budget that is derived from the PEP.

NOTE: SNM and residue elimination activities specifically covered elsewhere are considered part of the facility disposition process; however, these activities do not require a RFCA decision document.

Mothballing, as defined in section 3.3.4 of the DPP, means:

" . . . placing a building in a condition where it is no longer actively occupied. Ventilation, heating and air conditioning, and fire detection and protection systems may be turned off. Sump pumps to remove groundwater infiltration may be operating."

The DPP requires that a Reconnaissance Level Characterization Report (RLCR) be submitted to the Lead Regulatory Agency (LRA) prior to mothballing a facility. In addition, if DOE chooses to "mothball" a facility, DOE will submit a hazards analysis of the facility

8

specific conditions for the mothballed period, meet with the LRA to discuss any potential hazards or releases to the environment which might occur during the mothball period, devise actions to mitigate potential releases in collaboration with the LRA and propose adequate monitoring methods to monitor any release.

1.4 RESPONSIBILITIES

The following section provides a summary of the primary responsibilities for the group responsible for implementation and execution of facility disposition projects. These responsibilities are not meant to be all encompassing.

1.4.1 Vice President, Closure Project Integration (CPI)

The Vice President, CPI, has overall programmatic and compliance responsibility for all closure projects and facility disposition projects. The Vice President, CPI has the following responsibilities:

- Provides overall management guidance for all programs and projects under the charter of Closure Projects.
- Develops new or expanded programs and provides support for the programs.
- Ensures safety through implementation of the Integrated Safety Management philosophy.
- Interfaces with Environmental Systems and Stewardship (ESS) Vice President, DOE, EPA, and CDPHE.
- Oversees CPI cost and schedule budgeting and reporting information from Divisional Managers and Project Managers and establishes the Closure Project Baseline (CPB).
- Ensures that facility disposition activities under the CPI charter comply with the requirements of this Manual.
- Provides resources for the CPI group necessary to implement the Site quality assurance (QA) requirements and initiating, implementing, and communicating the requirements of the Site Quality Assurance Program (QAP).
- Assesses the effective implementation of the Site QAP within the CPI group through periodic management assessments.
- Ensures integration of facility disposition and environmental restoration actions.

1.4.2 Vice President, Nuclear Operations

The Vice President, Nuclear Operations is responsible for ensuring that facility disposition activities under the Nuclear Operations charter comply with the requirements of this Manual.

1.4.3 Vice President, Safeguards, Security, Site Operations and Integration

The Vice President, Site Operations is responsible for ensuring that facility disposition activities under the Site Operations' charter comply with the requirements of this Manual.

1.4.4 Vice Presidents, All Organizations

The Vice President from each organization is responsible for providing Subject Matter Experts (SME) support to facility disposition projects.

1.4.5 Division Manager, Decontamination and Decommissioning

The Division Manager, Decontamination and Decommissioning (D&D) is the primary point of contact with internal and external customers, clients, or regulators in coordination with RFCA Project Coordinators for all issues surrounding facility disposition projects. The D&D Division Manager has the following responsibilities:

- Ensures that facility disposition processes, tools, and techniques described in the manual are in accordance with the requirements contained in the RFCA and the DPP.
- Provides for interpretation, implementation, continuous improvement, maintenance, and approval of this Manual
- Approves all CPI PEPs and Waste Management Plans (WMPs). If the project is not currently assigned to CPI, the D&D Division Manager must concur with the PEP (signature on the document coversheet) that it meets the requirements of this manual.
- Approves (for release to DOE and other stakeholders) all Decommissioning Operations Plans (DOP), Proposed Action Memorandum (PAM), Interim Measure/Interim Remedial Action (IM/IRA), RFCA Standard Operating Protocols (RSOP), and RFCA documents as required by this Manual for all facility disposition projects.
- Reviews and reports on CPI performance measures, cost and schedule variances, and Baseline Change Proposals (BCP) and initiates corrective actions as necessary.
- Performs oversight on all facility disposition projects being conducted at the RFETS to ensure compliance with external and internal regulations and requirements, including quality assurance, environmental compliance, and health & safety.

1.4.6 Manager, D&D Project Execution

The D&D Project Execution Manager is the primary point of contact for the execution of assigned facility disposition activities. The D&D Project Execution Manager has the following responsibilities:

- Performs oversight on assigned CPI facility disposition projects being conducted at the RFETS to ensure compliance with external and internal regulations and requirements, including quality assurance, environmental compliance, and health & safety.
- Ultimate responsibility, accountability, and authority in any matter involving CPI facility disposition project execution.
- Provides expert judgement, and assists in planning of projects. If applicable, initiates tests and research that will contribute to project objectives.
- Monitors project reports for assigned projects to ensure that the reports are kept current and project milestones are met.

10

1.4.7 Manager, D&D Advanced Planning

The D&D Advanced Planning Manager is the primary point of contact for the planning and preparation activities associated with facility disposition including 2006 schedule coordination, P&I interface, and characterization activity interface. The D&D Advanced Planning Manager has the following responsibilities:

- Updates this Manual and assures Manual compliance with RFCA and DPP requirements.
- Implements the program requirements for the Site's facility disposition process.
- Develops site wide processes for the facility disposition effort. e.g., decontamination procedures, decontamination processes, etc.
- Implements Site processes needed for facility disposition, e.g., GSA, HUD.
- Provides single point of contact for the facility disposition document reviews and establishes facility disposition document consistency for the Site.
- Assigns lead reviewers and technical writers to review facility disposition project documents.

1.4.8 Manager, D&D Project Controls

The D&D Project Controls Manager maintains the D&D Cost Model, and provides input to the CPB and provides technical oversight of the WBS elements.

1.4.9 Manager, Construction Services

The K-H Construction Manager is responsible for safe and effective execution of all assigned site-construction projects. Included in this responsibility are the following:

- Provides direction to ensure applicable construction tasks are accomplished within authorized schedule and budget constraints.
- Directs and oversees activities of assigned personnel to ensure safe, reliable, cost-effective and efficient site construction activities.
- Establishes professional standards and expectations for all personnel within the organization and enforces accountability among them.
- Provides technical and administrative guidance to personnel within the organization.
- Plans and establishes the organization's management systems and performance measures to monitor, assess, and implement improvements.
- Reviews, approves and publishes relevant construction plans, schedules, and status reports as appropriate.
- Ensures that clear and effective vertical and horizontal communication are available for all members of the construction organization.
- Assures that all individuals within the organization understand and follow the appropriate site and construction procedures.
- Administers the construction organization's training, qualification, and certification program, as required.
- Performs routine walk-through inspections of assigned areas and documents deficiencies for correction or resolution.
- Accountable for the safety of all activities performed by direct reports and other applicable personnel with implicit "stop work" authority.

11

1.4.10 Kaiser-Hill Project Managers/Directors

The K-H Project Manager/Director (referred to within as PM) has ultimate responsibility, accountability, and authority in any matter involving their specific assigned disposition project. The K-H Project Manager/Director has the following responsibilities:

- Responsible for managing their assigned project within the authorized funding and approved work scope and schedule.
- Integrates activities of subcontractors and Site personnel and interfaces with regulatory agencies and DOE.
- Ensures that a project-specific administrative record file is created and maintained throughout the project.
- Ensures compliance with all regulatory and infrastructure requirements.
- Reviews, concurs, and implements all major planning documents, Decision documents, PEP, Authorization Basis (AB), Waste Management Plans, etc., associated with the project.
- Requests assistance from facility and Site safety management programs to oversee certain aspects of the work.
- Ensures that project teams, when required, are made up of the properly qualified safety personnel and subject matter experts.
- Implements the decisions made by the use of this Manual in the execution of planning, analysis, procedure writing, work package generation, and development of decision documents.
- Ensures that the primary subcontractor executes the work within the assigned scope of work, on time, and within budget.

1.4.11 Primary Subcontractor Project Managers

The Primary Subcontractor PMs have the following responsibilities:

- Identifies all activities within their areas of responsibility that require planning and collects available information.
- Ensures project is performed within cost, scope, and schedule.
- Coordinates staff, directs, and controls the project implementation through completion.
- Requests assistance from facility and Safety Management Program Subject Matter Experts to assist in developing the assessments of activity hazards and in selecting the appropriate work planning level.
- Ensures that teams, when required, are made up of the properly qualified safety personnel and subject matter experts.
- Implements the decisions made by the use of this manual in the execution of planning, analysis, procedure writing, work package generation, and development of decision documents.
- Support K-H PM with regulatory and DOE interface requirements.

1.4.12 Subject Matter Experts (SMEs)

SMEs support development and implementation of facility disposition documents in accordance with the regulatory requirements in this Manual, the *RFETS Decontamination and Decommissioning Characterization Protocol* (DDCP), environmental compliance, and the appropriate Safety Management Programs (SMPs). SMEs also provide input into the work

12

document planning and development process to develop a product that will implement the elements of this Manual, while also ensuring efficiency and workability are incorporated.

1.4.13 All Employees

All employees are responsible for following the requirements of this Manual and identifying and reporting Site health, safety, quality, and environmental concerns or deficiencies as a routine element of their normal activities.

1.5 RECORDS

Records generated by this Manual are considered QA records. The PM maintains and dispositions the screening decision documents in accordance with 1-V41-RM-001, *Records Management Guidance for Records Sources*.

Records identified as Administrative Records (ARs) **SHALL** be maintained in accordance with 1-F78-ER-ARP-001, *CERCLA Administrative Records Program* to be placed in the project specific administrative record file.

See also Section 3, Scoping, Section 7, Project Closeout, and Appendix A for more specific information on project files and Administrative Records.

2.0 FACILITY DISPOSITION PROCESS

The purpose of this Section is to provide the user with an overview of:

- The regulatory framework for facility disposition, e.g., the RFCA and the DPP requirements;
- How the RFCA and DPP have been incorporated into the Site's FDPM as programmatic requirements so as to ensure a consistent and standardized approach to performing facility disposition activities across the Site;
- A brief description of the overall facility disposition process, including flowcharts, and each of the process elements, referencing where in the Manual further detailed descriptions can be found;
- Discussions of key or cross-cutting topics of the facility disposition planning process not explicitly covered in the Chapters 3-7 discussion of project phases, including:
 - The PEP
 - Facility characterization
 - Worker and public safety and environmental values
 - Quality assurance/quality control
 - Decommissioning work breakdown structure and project control
 - Deactivation activities and process
 - Decommissioning activities
 - Environmental restoration activities
 - Transferring landlord responsibilities if it is determined that such a change is required

2.1 REGULATORY FRAMEWORK

On July 19, 1996, the DOE, EPA and CDPHE executed the RFCA. RFCA is the Federal Facility Agreement pursuant to the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and Consent Order under the RCRA and Colorado Hazardous Waste Act (CHWA). RFCA replaces the Interagency Agreement between these parties that had been in place since 1991 and regulates the Site cleanup under the three statutes.

The Rocky Flats Vision (Vision), RFCA Appendix 9, guides all activities at the Site. Among other things, the Vision for Rocky Flats is to achieve accelerated cleanup and closure of the Site in a safe, environmentally protective manner, and in compliance with applicable state and federal environmental laws and agency agreements. All work done at the Site to achieve the Vision is scheduled through a unified planning process that is captured in the CPB, as described in RFCA ¶¶ 136 to 141.

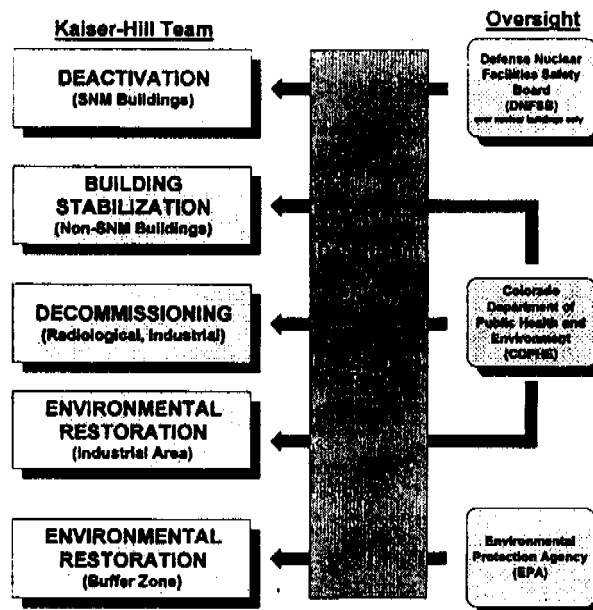
RFCA coordinates DOE's response obligations under CERCLA, closure obligations under CHWA and corrective action obligations under CHWA and RCRA, as well as activities not regulated under the Federal Facility Compliance Act (FFCA) for treatment of mixed wastes generated by RFCA-regulated activities.

As required by RFCA, the DPP establishes the regulatory framework to be used for the disposition of facilities at the RFETS. Decommissioning of contaminated facilities **SHALL** not start without the approval of a RFCA decision document. The DPP describes the screening process for determining what activities require a RFCA decision document and establishes the process for obtaining regulatory approval to start decommissioning activities.

Many activities do not require RFCA decision documents or RFCA decisions. These activities include, but are not limited to, real and personal property disposition under federal property management requirements, relocation of mission components to other DOE sites, RCRA closures, day-to-day operation of the site to provide protection to the worker, public and the environment, and ongoing hazard reduction efforts.

Figure 2-1 depicts the various regulatory oversight authorities and decision-makers for the Site. This Figure is not intended to be all inclusive, but rather to provide a simplified view of the primary or LRA for each life-cycle phase of the Sites' closure projects. The term LRA is used in this Manual to define the regulatory agency that is the assigned approval authority. The LRA functions as the primary communications and correspondence point of contact with the Project Manager. The Project Manager also interfaces with the Support Regulatory Agency (SRA) and provides documents to the SRA for review, as needed. The LRA coordinates technical reviews with the SRA and consolidates comments assuring technical and regulatory consistency and completeness.

Figure 2-1



2.1.1 FACILITY CLASSIFICATION TYPE

For planning purposes, each RFETS facility has been preliminarily screened by K-H into one of three types; Type 1, Type 2, or Type 3 (see Appendix B-2 for the Listing of Facilities by "Anticipated" Type). This identification is based on the differing levels of contamination (radioactive and non-radioactive) known or believed to exist within the facility. Each facility "Type" has its own degree of regulation via the RFCA and the DPP. The final decision on the facility type is determined by RFFO after the RLCR is completed, and will be discussed during the Joint Scoping Meeting (See Section 3) held between DOE and the LRA. The type will be finalized after the submittal and subsequent review and concurrence of RLCR (See Section 4) by the LRAs.

15

Excerpted from Section 2.2 of the Decommissioning Program Plan

Type 1 *Buildings free of contamination*

"Free of contamination" means that the following conditions have been met:

- Hazardous wastes, if any, generated and/or stored in the facility have been previously removed in accordance with CHWA and RCRA requirements and any RCRA units have been closed or, if partially closed, the parts of the unit within the facility have been certified as being clean closed; (It will be insufficient to have RCRA units simply in a RCRA stable configuration.); AND
- Routine surveys for radiological contamination performed pursuant to the RFETS radiological protection program show the building is not contaminated; AND
- Surveys, if required, for hazardous substance contamination show the building is not contaminated, AND
- If any hazardous substances including polychlorinated biphenyls (PCBs) or asbestos are present, they are an integral part of the building's structural, lighting, heating, electrical, insulation or decorative materials. As such, they are not "contamination."

Since the presence or absence of physical or safety hazards, while important to the Site in terms of how to proceed with a building's disposition, is not a determinant of whether it will be regulated pursuant to RFCA, DOE will not consider such hazards in categorizing a building as Type 1.

Type 2 *Buildings without significant contamination or hazards, but in need of decontamination*

Type 2 buildings contain some radiological contamination or hazardous substance contamination. The extent of the contamination is such that routine methods of decontamination should suffice and only a moderate potential exists for environmental releases during decommissioning. Some buildings in this category, e.g., 865, 886 and 991, are now undergoing, or will undergo deactivation in certain areas prior to decommissioning. The mere fact that deactivation will occur does not push a building into the Type 3 category. Most buildings where industrial operations occurred that used hazardous substances or radioactive materials or both will fall into this category.

Type 3 *Buildings with significant contamination and/or hazards*

Type 3 buildings contain extensive radiological contamination, usually as a result of plutonium processing operations or accidents. Contamination may exist in gloveboxes, ventilation systems, or the building structure. Site personnel expect those buildings that were used for plutonium component production, along with the major support buildings for such production, will have significant contamination, and are therefore expected to be classified as Type 3. These buildings include:

- 371/374	- 559	- 771/774
- 707	- 776/777	- 779

Project Managers will need to review the facility type, using the Anticipated Facility Type List provided in Appendix B-2, prior to the Scoping phase of planning.

16

2.1.2 Project Generated RFCA Decision Documents

Prior to decommissioning, certain authorizing RFCA Decision Documents or RFCA decisions or application of Section 1.1.5 of the DPP must be in place before work activities can begin. The type of authorization may be dependent on the facility's Type. In accordance with RFCA Part 7, all parties have agreed to participate in the consultative process to reach consensus on the scope and content of the RFCA Decision Documents, including any required changes that may be proposed during the course of the project.

Once a facility's classification or type is concurred with by the LRA, it **does not** change unless discovery of unknown or additional contaminants. A consultative process is used to determine if the facility type needs to be placed in a higher classification via the RFCA and DPP. A Type 3 building is not down graded to a Type 1 or 2 as it is progressively decontaminated.

The four types of Decision Documents that have been established for decommissioning activities are discussed further in Section 5 and listed below:

- PAM, used for activities less than 6 months in duration
- IM/IRA, used for activities longer than 6 months in duration
- DOP, generally used only for Type 3 buildings
- RFCA Standard Operating Protocol (RSOP), may be used for repetitive decommissioning activities regardless of the facility type
- The DPP is used as the decision-document for Type I facilities.

For **Type 1** facilities, the RLCR is sent to DOE who approves with the recommendations in the RLCR and sends the RLCR to the LRA. The results of the characterization provide the LRA with sufficient knowledge of the hazards and contamination in the facility for them to concur that it's a Type 1. Development of a RLCR is further discussed in Section 5.

For **Type 2** facilities, the RLCR is sent to DOE who approves with the recommendations in the RLCR and sends the RLCR to the LRA. The LRA either concurs or not with the facility type.

Note: If DOE, as a RFCA party, disagrees with the LRA decision, then DOE may elect to go into dispute resolution.

For **Type 3** facilities, the RLCR is sent to DOE who approves with the recommendations in the RLCR and sends the RLCR to the LRA. The LRA either concurs or not with the facility type.

Note: Additional non-RFCA authorizing documents may also be necessary before decommissioning can commence. These documents include, but are not limited to, Nuclear Safety AB documents, e.g., Basis of Interim Operations (BIO), Facility Safety Analysis Reports (FSARs), as defined in the Nuclear Safety Manual and as described for Facility Disposition purposes, in Section 5.

2.2 FACILITY DISPOSITION PLANNING PROCESS

Facility disposition encompasses a wide range of activities ranging from deactivation and decontamination to final demolition or release of the building for reuse. Planning and execution must move toward a well-integrated parallel approach where all of these activities **may** occur at any time, simultaneously, within the facility, under the appropriate regulatory decision-making

framework. Figure 2-2 provides a high-level process flowchart of the facility disposition process. Figure 2-3 provides a more detailed look at some of the key processes depicted in Figure 2-2.

In order to discuss the activities within the planning and execution of the decommissioning portion of a facility disposition project, it is convenient to define phases within which these activities would nominally be conducted. These phases are discussed briefly below, along with their purpose and the chapter in which the activities are discussed in detail.

Scoping (Section 3)

The Scoping phase consists of the initial planning effort to define the project approach, scope, cost, and schedule and establish the project team. Prior to this phase, planning is conducted at the programmatic level and project parameters (e.g. cost, waste) are based on parametric models. This phase typically occurs in parallel and is coordinated with deactivation and/or hazards reduction in the context of the overall facility disposition project.

Phase I Planning (Section 4)

In Phase I Planning, the initial planning assumptions are investigated and the planning refined. The principal effort is the characterization of the facility, which establishes the existing conditions, better defines the scope of work, and permits the feasibility of approaches to be determined. At the completion of this phase, the execution activities are defined and are ready to be planned in detail.

Phase II Planning & Engineering (Section 5)

This phase consists of the activities necessary to begin execution, such as development of procedures, preparing for readiness reviews, and procurement of equipment and services. The regulatory decision document is also approved. It includes the detailed planning – work package development – that occurs shortly before physical work. A project may have Phase II Planning occurring for one area concurrent with physical deactivation in the same area, and mission activities or dismantlement occurring in adjacent areas within the facility.

Project Execution (Section 6)

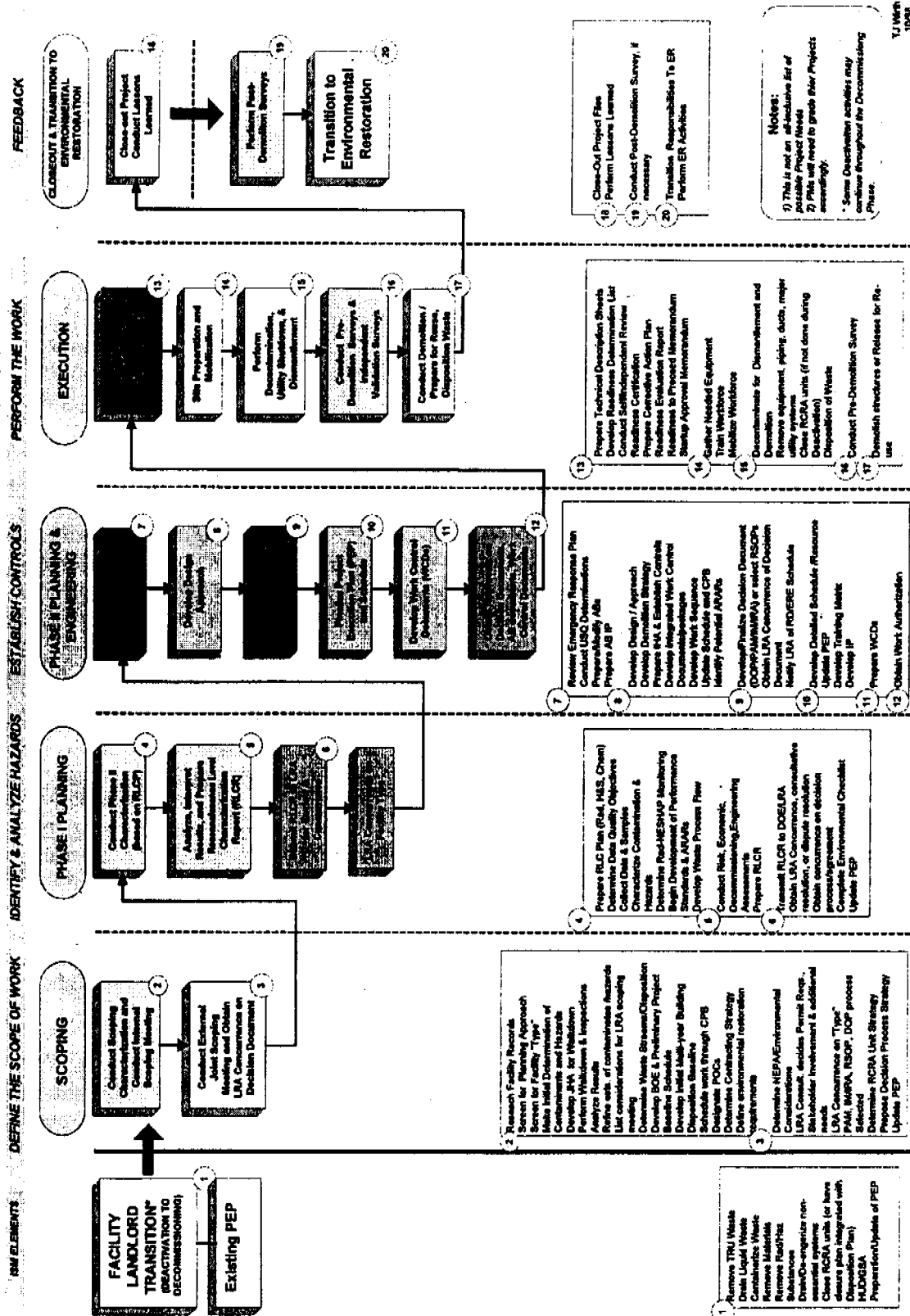
Project Execution includes the physical dismantlement of internal and external facility equipment, decontamination of the building structure, and the demolition of the facility. It begins with the readiness determination/reviews and concludes with the demolition of the facility and removal of the slab. The Environmental restoration activities are integrated with the end of this phase.

Project Close-out (Section 7)

The final phase of decommissioning in a facility disposition project, this phase covers the activities necessary to complete project and regulatory closure of the work. It is primarily an administrative effort and may be conducted in parallel with environmental restoration work. Its purpose is to make sure follow-on actions and Site closeout (both regulatory and property management) are facilitated.

FACILITY DISPOSITION SCHEMATIC

Figure 2-2



Page 20:

Please see file Facility Disposition Program Manual:
Section 2 Page 20: Map at the DOCLINK page.

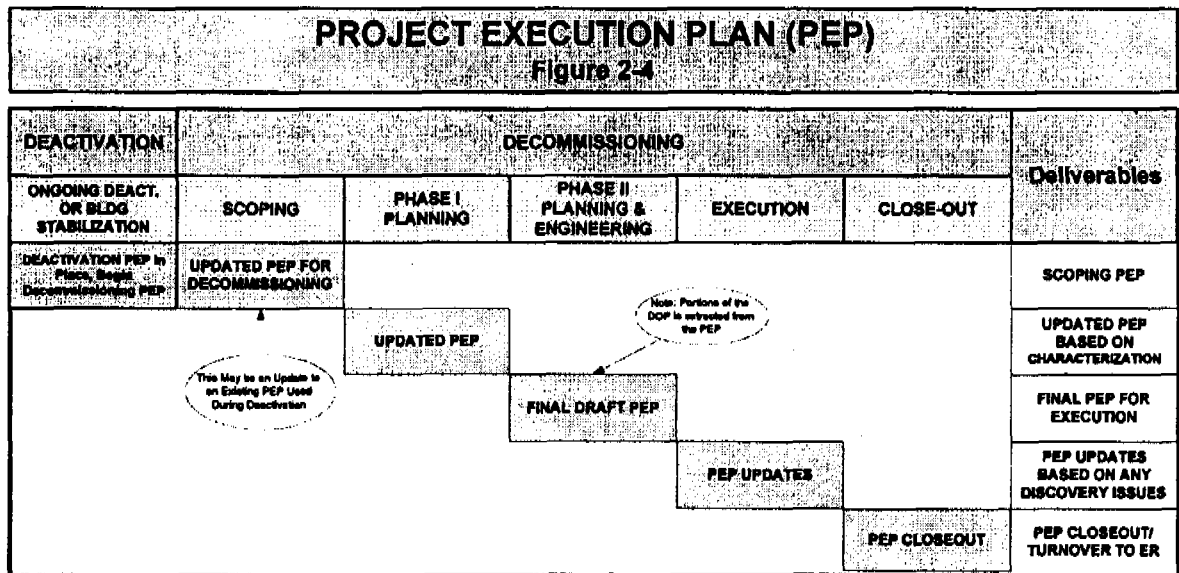
Thanks

2.3 CROSS-CUTTING TOPICS IN THE FACILITY DISPOSITION PLANNING PROCESS

Discussions of key or crosscutting topics of the facility disposition process are provided below. In some cases the topics are relevant to all phases of decommissioning. In other cases, while external to the decommissioning portion of the project, their interfaces with decommissioning are extremely important to the success of the overall project.

2.3.1 PROJECT EXECUTION PLAN (PEP)

The facility disposition PEP is considered a "living" document that is maintained up-to-date throughout the life cycle of the project as depicted in Figure 2-4. The PEP presents key information on what the project is (scope), and how much information is required (Phase I and II Planning), and how long it will be performed (Execution). PEP's are required for all facility disposition projects (this includes Deactivation as well as Decommissioning). The PEP documents project expectations and work processes. A copy of the current version of the PEP should routinely be provided to the DOE project point of contact for review, and may be provided to the LRA and SRA for review when requested. The copies are provided to DOE and regulators for information and are not approved by them. DOE may use PEPs as supporting information, in conjunction with the PRD and BCPs, to approve a projects scope, schedule, and budget. The PEP is graded based on the complexity of the project and contains planning deliverables and summarizes the results of the detailed project development and engineering activities.



PEPs are approved by the K-H D&D Division Manager, or designee. Facility disposition projects not assigned to CPI are to have their PEP approved by the responsible manager and concurred with by the D&D Division Manager. The PEP Should be graded to the level commensurate with the project, for instance, a PEP for disposition of B779 would require a much greater level of planning, assessment, plans, details, etc, than the disposition of a construction trailer, or a facility that contained no radiological or non-radiological hazardous materials. A PEP Template is provided in Appendix C-1.

21

*NOTE: Project Managers **SHALL** use the template format provided for in Appendix C, identifying with a "NA" those sections not applicable to their project, and grading the level of detail for each section commensurate with the project needs. This ensures consistency and standardization of the process and products, and facilitates the review and approval cycle. For Type 1 Facilities, it is expected that the PEP be no more than a few pages. See Section 2 for further PEP expectations for Type 1 facilities.*

The Project Deliverables Matrix contained in Appendix A-2 provides a listing of the various plans, documents, and reports, that *may* be necessary for a given project. Project Managers **SHALL** review the matrix and ensure those items that are necessary and appropriate for their project are completed prior to and during each planning phase, and then during execution. The PEP is updated during each phase of the project, including Execution. At project end, the PEP is closed out and placed in the project files.

A key element in the decommissioning project planning process, and an appendix to the PEP, is the Waste Management Plan (WMP). The WMP provides an estimate of the magnitude of project wastes, identifies hard-to-dispose of wastes, and describes how these waste types are integrated into the overall Site waste management infrastructure. Identifying the types and magnitudes of waste to allow other Site support organizations to plan their support to the project, such as delivery of waste container, disposal contracts, waste storage prior to disposition, maintaining or closing treatment units, etc. Guidance for developing a WMP is given in Appendix C-2.

22

PROJECT EXECUTION PLAN ELEMENTS BY PHASE

SCOPING

- Asset disposition strategy
- Type 1 Facility Disposition Checklist (as appropriate)
- Decision Document approach
- Initial review of ARARs, and identification of administrative vs. substantive requirements
- Initiate Environmental Checklist (including air and water).
- Organization and responsibilities, etc.
- Pre-conceptual scope, schedule, and budget estimates
- Project contracting strategy
- Project waste environmental management strategy – establish management practices for process versus remediation waste
- Proposed Authorization Basis strategy
- Proposed milestones including deactivation endpoints
- Proposed project activities and technical approach
- RCRA Unit closure approach
- Scoping characterization
- Specific proposed execution methods, where unique or important to project decision making
- Well-defined scope, budget, and estimate for Phase 1 Planning
- Consent order and other agency agreement requirements

PHASE I – PLANNING

- Conceptual scope, schedules, and budget estimates.
- Defined scope, budgets, and estimate for Phase 2 Planning
- Description of expected engineering and IWCP work packages, including scope, cost, and schedule,
- Engineering Assessments
- Health and safety impacts
- Environmental requirements and impacts
- More detailed hazards characterization
- Proposed milestones including deactivation endpoints
- Proposed project activities

PHASE II – PLANNING AND ENGINEERING

- Final Health & Safety Plan
- Final detailed budget and schedule
- Final procurement & contracting strategy
- Final Waste Management Plan
- Final engineering design packages & work control packages
- Approved AB document.

EXECUTION

- Updates as necessary to keep the document current due to in process surveys and "discovery" issues that *may* require document revisions.

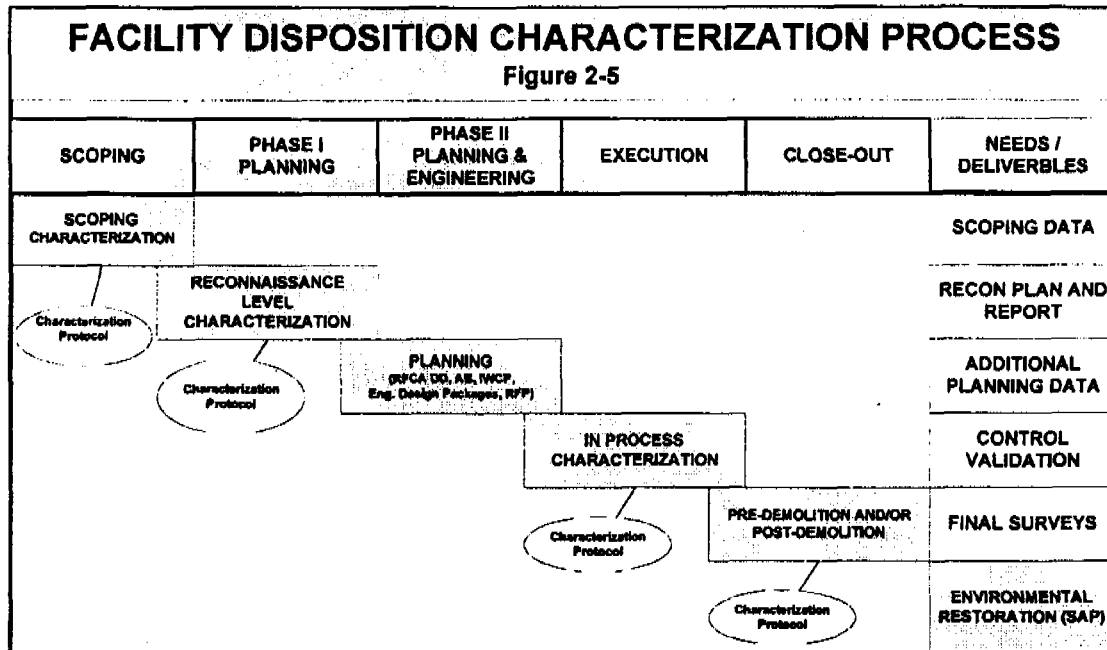
CLOSEOUT

- Final review of the matrix(s) to ensure completion/collection of all project documents, and plans, etc.

2.3.2 FACILITY CHARACTERIZATION

For purposes of facility disposition, characterization is a continual process throughout the disposition of the facility and is accomplished over several phases as depicted in Figure 2-5. Characterization planning and characterization field activities are part of RFCA decommissioning and **SHALL** be preceded by internal scoping meetings.

23



If the characterization changes the environmental checklist, it **SHALL** be reviewed and updated appropriately. Reconnaissance level characterization has two primary purposes. The first is the identification of hazards necessary to establish controls to protect the worker, the public, and the environment. This is accomplished per the Site-wide Reconnaissance Level Characterization Plan (RCLP) to the extent necessary, to prepare, submit, and obtain concurrence from the LRA, the RLCR, which contains the results of the characterization. The RLCR provides the basis for the final recommendation to DOE on the facility "type", i.e., Type 1, Type 2, or Type 3.

The collection of characterization data required the RLCR follows the guidance provided for in the RCLP. The characterization process described within that document ensures a consistent and systematic approach in obtaining characterization data regarding the physical hazards, radiological hazards, and non-radiological hazardous materials in the activity/facility. It uses a Data Quality Objective (DQO) process that identifies type, quality, and quantity of data. The DQO process helps the user to define DQO qualitative and quantitative statements that accomplish the following:

- Clarify technical and quality objectives,
- Define the appropriate type of data, and
- Specify tolerable levels of potential decision errors needed to establish a basis for quality and quantity of data for decision-making.

The second purpose of the RLC is to collect any additional data, e.g., written documentation, walkdowns, or physical sampling, necessary for developing and finalizing the various authorizing work documentation finalized in Phase II Planning, and as needed for project execution. Examples of additional data elements are engineering & design data; other facility concurrent and ongoing activities; utility systems; and equipment.

DETAILED CHARACTERIZATION ELEMENTS

Scoping Characterization - occurs during the Scoping Phase and includes:

- Collection of all historical documentation regarding the facility mission, operations, and abnormal events (e.g., spills), including agency records
- Current and documented radiological survey reports and Radiological Improvement Reports
- Health and Safety routine surveillance reports
- Environmental and waste reports
- Authorization Basis documents (Site, SAR, BIOs, FSARs, BFOs, etc)
- Incident reports
- Prior facility resident/operator interviews
- Other informational reports or data, etc.

Reconnaissance Level Characterization - occurs during Phase I Planning and includes:

- Identification of radiological hazards, e.g., stored radioactive sources, contaminated areas, SNM, etc.
- Identification of non-radiological hazardous constituents and/or substances, e.g., beryllium, asbestos, polychlorinated biphenyls (PCBs), lead and other heavy metals, etc.
- Identification of physical safety hazards

Planning & Engineering ("Characterization") - may be initiated during Phase I, but is completed during Phase II Planning and includes:

- Identification of engineered systems, e.g., ventilation, electrical, process, structural, criticality, radiological systems as needed for both the conduct of the activity(s), Authorization Basis issues, and development of a strategy for determining the best approach for system removal, especially in relation to radiological and non-radiological contaminants hold-up.
- Identification of concurrent activities

"In-Process" Characterization - occurs during the Project Execution Phase and includes:

- In-Process surveys for radiological and non-radiological hazardous constituents and/or substances (*per Protocol*)
- Physical hazards, e.g., noise, confined spaces, excessive heights, electrical, etc. necessary for continuing facility disposition activities.

Pre-demolition Survey ("Characterization") - occurs near the end of the Project Execution Phase and prior to facility demolition and includes:

- *Pre-Demolition Survey*
- Independent Verification/Validation Survey (*Note: DOE will determine if required*)

Environmental Restoration ("Characterization") - occurs prior to Environmental Disposition and includes:

- Post-Demolition Survey of the remaining concrete slab, if necessary
- Final Surveys of various waste forms prior to shipment to designated waste disposal areas

2.3.3 WORKER AND PUBLIC SAFETY AND ENVIRONMENTAL VALUES

Maintaining a safety awareness culture is enhanced through the use of the philosophy and principles of the Integrated Safety Management System (ISMS). These principles are essential in the design and development of the various planning documents listed below. It is incumbent on the PM and project team to maintain a focus on these principles during development of work control documents, and to follow the guidelines provided in the Integrated Work Control Program (IWCP).

The K-H Team is committed to continued excellence, leadership and stewardship in protecting the environment. Environmental protection is a primary management responsibility as well as, the responsibility of every employee and supplier of services and products to our organization. It is management's responsibility to ensure environmental concerns are built into all project control documents and to integrate environmental information into all levels of project management. The Site Environmental Stewardship program is part of the Site infrastructure and includes environmental management systems and tools defining environmental and programmatic elements to measure and verify compliance and to mitigate impacts to the

25

environment. It is the PM's responsibility to ensure these systems and tools are incorporated as applicable at the project level.

2.3.4 QUALITY ASSURANCE AND QUALITY CONTROL

This section defines the requirements and controls that are employed and implemented by K-H to perform facility disposition with adequate technical defensibility, and provides a roadmap of the documents, procedures, and standards applicable to facility disposition activities. Quality assurance/quality control (QA/QC) criteria listed in this section supplement the K-H *Quality Assurance Program* (QAP) by emphasizing requirements applicable to planning and implementation of decommissioning activities. The application and implementation of these criteria into items and services shall be consistent with the graded approach and applied in project specific documents. In practical terms, the graded approach requires selective application of QA requirements and control to items and services commensurate with their importance to safety and project objectives. The QA/QC standards that apply to the overall facility disposition process are 10 CFR 830.120, *Quality Assurance Requirements*, and DOE Order 5700.6C, *Quality Assurance*. These standards are the overriding requirements at RFETS and are the basis of the K-H QAP.

Personnel Training and Qualification

All facility disposition personnel shall receive training in the procedures and be qualified to perform the activities required. The extent of training must be proportional to the education, experience, and proficiency of the individual, and the scope, complexity, and nature of the activity. Training must be designed to achieve initial proficiency and to maintain that proficiency over the course of work activities. Records of training, including testing to demonstrate qualification, must be documented.

Quality Improvement

Quality improvement shall be realized through use of a systematic means of identifying, tracking, and correcting issues (deficiencies, nonconformances, issues, etc.). Issues may be identified by any project personnel, at any time, through formal documentation of issues as stated in 1-MAN-012-SCARM, *Site Corrective Action Requirements Manual*. The extent of causal analysis and corrective action shall be commensurate with the significance of the failure or problem. Lessons learned shall be communicated to staff from management where appropriate. The following documents implement quality improvement requirements:

- Site Corrective Action Requirements Manual (1-MAN-012-SCARM)
- Site Integrated Oversight Manual (1-MAN-013-SIOM)
- Site Lessons Learned/Generic Implications Requirements Manual (1-S27- ADM-16.18)
- Radiological Improvement Reports (1-H02-HSP-3.02)
- Stop Work Action (1-V10-ADM-15.02)
- Occurrence Reporting Process (1-D97-ADM-16.01)
- Performance Indication and Trend Analysis (1-E93-ADM-16.18)
- Control of Non-conforming Items (1-A65-ADM-15.01)
- Control of Waste Nonconformances (2-U76-WC-4030)
- RFETS Radiological Control Manual (Site RCM)

26

Document Control, Records & Data Management

The document control process is described in procedure MAN-063-DC, *Document Control Program Manual*. Essential policies, plans, procedures, decisions, data, and transactions of the project shall be documented to an appropriate level of detail. Records will be maintained in accordance with 1-V41-RM-001, *Records Management Guidance for Records Sources*. Documents and records that are to be placed in the CERCLA administrative record shall be dispositioned in accordance with 1-F78-ER-ARP-001, *CERCLA Administrative Records Program*.

Work Process

All facility disposition activities will be executed using the RFETS IWCP. The IWCP requires the preparation of work packages that provide work control and incorporates the *Integrated Safety Management (ISM)* principles. The ISM principles ensure workers are involved in the planning, hazard identification, and implementation of the demolition activities. The IWCP review process evaluates the activity, hazard identification, mitigation measures and compliance with the authorization basis documents.

Design

Design controls are specified in the *Conduct of Engineering Manual (COEM)* and the *Site Engineering Requirements Manual (SERM)*.

Procurement

Procurement quality requirements shall be delineated in procurement and subcontract documents. All SOWs distributed by companies at RFETS shall be reviewed by quality personnel for quality requirements to ensure that adequate quality controls are imposed on the subcontractor. Ongoing oversight of the subcontractor shall be performed to ensure that these controls are implemented. Procurement requirements are implemented through the following documents:

- Procurement System Manual
- Acquisition Procedure for Requisitioning Commodities and Services (1-W36-APR-111)

Inspection & Acceptance Testing

The inspection, testing and calibration of items, services and process, including equipment is controlled through the COEM, SERM, IWCP, and procurement, metrology, Control of Measuring and Testing Equipment programs (Measuring and Test Equipment Management Manual, MAN-092-M&TEM), and 1-PRO-072-001, *Inspection and Acceptance Test Process*.

Management and Independent Assessments

Management assessments shall be planned, scheduled and performed by project management to assess an organization performing work to determine if the objectives, goals and processes are adequate. Management assessment shall be documented through reports, internal memoranda, or other suitable reporting means.

Independent assessments are performed by personnel who are not directly responsible for the work to establish whether the prevailing management structure, policies, practices, procedures and data are adequate for ensuring that the quality of the results based on the risk and performance indicators needed are obtained. Deficiencies will be identified, tracked and closed in accordance with the *Site Corrective Action Requirements Manual*. Assessment requirements are implemented through the following documents:

- Kaiser-Hill Management Assessment Program (3-W24-MA-002)
- Site Integrated Oversight Manual (1-MAN-013-SIOM)

2.3.5 WASTE MANAGEMENT

Waste management for the project is performed in accordance with the PEP, RFCA Decision Document, WMP, and Site waste management procedures specifying packaging and handling requirements. The Site Waste Management Organization **SHALL** be notified of an estimated project waste generation, by category (i.e., low level, low level mixed, sanitary, transuranic, transuranic mixed, and hazardous). If, during the in-process characterization or at any time during the execution phase of the project, the estimated waste generation rate changes significantly, the Principal Subcontractor PM **SHALL** notify the Site Waste Management Organization of that change. In addition, the WMP **SHALL** be updated to reflect the significant changes in generation rates. Appendix C-2 provides guidance to the development of WMPs.

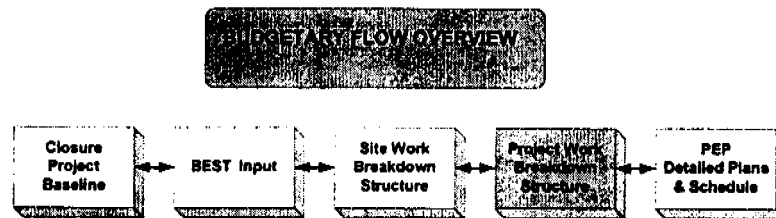
Waste containers are procured following the criteria specified in the WMP. All wastes **SHALL** be generated, managed, certified, and dispositioned in accordance with the following procedures, as appropriate:

- Hazardous Waste Requirements Manual 1-10000 HWR
- Transuranic (TRU) Waste Management Manual 1-MAN-008-WM-001
- Low Level Waste Management Plan 94-RWP/EWQA-0014
- Waste Characterization Generations and Packaging, 1-PRO-079-WGI-001
- Transportation Manual
- PCB Management Plan
- Offsite Waste Management Program, 1-MAN-037-OWMP

All government property, real or personal, must be accounted for and in some cases *may* require special disposition. The project **SHALL** follow the requirements in the Property Management Manual (PMM) 1-MAN-009-PMM. The requirements for Property Disposition are contained in Section 5 of the PMM. Before any property can be removed from a facility in any form it must be accounted for. In general, property will either be free released and shipped to PU&D for disposition, shipped from a RFETS contaminated area to another contaminated area in the DOE Complex, or disposed of as waste.

2.3.6 DECOMMISSIONING WORK BREAKDOWN STRUCTURE AND PROJECT CONTROL

The project WBS and WBS Dictionary provide the project framework for definition, management, and control of the project, and show how the project fits together. The Project WBS is extended from the relatively generic Site CPB WBS level 5 and level 6 elements to include all of the building-specific activities required to disposition the building. The Project WBS **SHALL** be incorporated into the PEP. An overview of the budgetary flow process from the CPB to the WBS is shown below.



Every project has some level of a WBS included in the CPB. The K-H and Principal Subcontractor PMs **SHALL** ensure that:

- The WBS and WBS Dictionary be extended beyond the levels included in the Site-wide WBS.
- The WBS is provided to D&D Projects for review and approval. Any change to the existing Site WBS is approved through the Baseline Change Proposal (BCP) process.
- The WBS Dictionary identifies appropriate activity endpoints, or identifies when the appropriate endpoint will be defined (i.e. after which other project activity is completed).
- The WBS Dictionary includes other programs (including deactivation activities) which are occurring concurrently in the building, or explicitly describes the interfaces between activities of different programs.
- The project uses the facility disposition project schedule template and aligns the project(s) activities with the WBS. The WBS is required to standardize cost collection for facility transition projects.
- The project milestone, cost and schedule data tie to the project WBS.

The following Decommissioning WBS Dictionary **SHALL** be used for all facility disposition projects, unless granted an exception by D&D Projects. If a facility disposition project contains more than one building, then the WBS **SHALL** be able to separate scope and accrue costs for each separate building.

Decommissioning Work Breakdown Structure (WBS) Dictionary

... 04.01 Planning and Engineering, Building XXX Decommissioning

This element covers all the task specific direct labor, equipment, materials, supplies and subcontract (A5X) costs associated with the Planning and Engineering for the decommissioning of Building XXX. The scope of this includes, but is not be limited to, activities: such as: the preparation of the PEP, DOP, PAM, IM/IRA, RCRA Unit Closure Description Document, Health and Safety Plan (HASP), IWCP, utility relocation design documents, building demolition design documents, equipment removal design documents, design engineering inspection, preparation of required procedures; the preparation and submittal of all permits.

... 04.02 Characterization, Building XXX Decommissioning

This element covers all the task specific direct labor, equipment, materials, supplies and subcontract (A5X) costs associated with the characterization processes for the decommissioning of Building XXX. Under this Characterization WBS, costs are collected under the following "Sub-Categories (lower level WBS Elements):" Scoping, Reconnaissance, In-process, and the Pre-demolition Survey, which includes independent verification, if required, for the D&D Closure Project. This element does not cover the characterization associated with IHSS or UBC remediation, which is part of ER.

Decommissioning Work Breakdown Structure (WBS) Dictionary

... 04.03 Site Preparation, Building XXX Decommissioning

This element covers all the task specific direct labor, equipment, materials, supplies and subcontract (A5X) costs associated with Site Preparation for the decommissioning of Building XXX. The scope of this element could include, but is not be limited to, activities such as; the establishment of lay down areas, shipping and material processing areas; set-up of size reduction, monitoring and waste staging areas, and step-off pads; and the removal of stored wastes.

... 04.04 Decontamination, Building XXX Decommissioning

This element covers all the task specific direct labor, equipment, materials, supplies and subcontract (A5X) costs associated with Decontamination for the decommissioning of Building XXX. The scope of this element could include, but is not be limited to; the decontamination of building interior/exterior surfaces; and non-process equipment, drains, tanks, piping, ducting, etc. In addition, it includes the removal of hazardous and toxic substances; e.g., asbestos abatement, lead/lead based paint and PCB removals, etc. associated with the decommissioning effort.

... 04.05 Dismantlement, Building XXX Decommissioning

This element covers all the task specific direct labor, equipment, materials, supplies and subcontract (A5X) costs associated with Dismantlement for the decommissioning of Building XXX. The scope of this element could include, but is not be limited to, activities such as; the decontamination, stripout, removal and size reduction, if required, of process equipment (gloveboxes, tanks, process piping, ducting, etc.), distributed systems (building lighting/power, heating, water, sewer, etc.), and isolation of the building/structure/etc. from the rest of the site infrastructure.

... 04.06 Demolition and Disposal, Building XXX Decommissioning

This element covers all the task specific direct labor, equipment, materials, supplies and subcontract (A5X) costs associated with the Demolition and Disposal of clean construction rubble and debris for the decommissioning of Building XXX. The scope of this element could include, but is not be limited to, activities such as the demolition and disposal of the roof, non-structural and structural components, foundations (if applicable) and, connecting structures (tunnels, breezeways, overhead walkways, etc.) of the building/structure/etc undergoing demolition. This element also includes the packaging, pre-certification and movement to an identified pickup point; i.e., building loading dock, etc., of contaminated wastes generated during the overall decommissioning effort. Any additional movement, or treatment, storage and disposal (TSD) of contaminated (hazardous and/or radiological) materials, after they have been packaged and staged at the pickup point, for the types of hazardous and/or toxic wastes generated as a result of the overall decommissioning effort performed per the elements above, e.g., site preparation, characterization, decontamination, dismantlement (stripout), etc., are not included in this element. These waste disposal costs are the sole responsibility of WM.

Pre-certification of waste materials is defined as that degree or amount of waste inspection and certification required, on the part of the specific D&D Project, to assure that there is a reasonable probability that the packaged wastes will not be returned to the project for additional work. Pre-certification does not involve the more sophisticated techniques of waste certification; such as, NDA, head space sampling, etc. These sophisticated certification techniques are the responsibility of Waste Management (WM).

Decommissioning Work Breakdown Structure (WBS) Dictionary

... 04.07 Project Management, Building XXX Decommissioning

This element covers all the task specific direct labor, equipment, materials, supplies and subcontract (A5X) costs associated with the Project Management efforts for the decommissioning of Building XXX. The scope of this element includes, but is not be limited to, activities such as: project management, construction management, oversight, project engineering, project administration, project controls and reporting, finance and accounting, training coordination, project records management and document control, etc.

... 04.08 Support Services, Building XXX Decommissioning

This element covers all the task specific direct labor, equipment, materials, supplies and subcontract (A5X) costs associated with obtaining support services for the decommissioning of Building XXX. The scope of this element could include, but is not be limited to: support services such as: training, procurement and contract administration, security and fire protection, QA/QC, waste management and inspection, transportation and construction equipment, radiological operations and engineering, Radiation Control Technician (RCT) support, medical and health, safety and industrial hygiene, shipping/receiving and warehousing, legal, regulatory interface, laundry, small tools and personnel protective equipment (PPE), analytical laboratory, toxic and hazardous material handling, utilities, excess property, telecommunications and information resources, finance and administration, planning and integration and other support services yet to be identified.

The scope of work to accomplish facility disposition *may* be broken down into discrete worksets. Although there is no requirement to break the work into "worksets", it is recommended for facility disposition projects. These sets combine all required activities for completion of facility disposition. Segregation of the sets into deactivation and decommissioning categories provides for differentiation between regulatory requirements and the work flow process. All sets **Should** have specific endpoints or workset boundaries assigned that will define the phase of completion of the task.

Establishing specific requirements for project controls and reports ensures continuity, integration, and consistency in communicating and documenting the current status and progress of projects. Individual reporting requirements and control criteria are established and defined within the PEP on a graded approach by each project. Project controls and reports are intended to facilitate the following:

- Early identification of potentially damaging trends and occurrences.
- Minimization of management time necessary for detailed review.
- Uncomplicated presentation of relevant information.
- Clear representation of problem significance and required actions.
- Focus on relevant issues.
- Reasonable cost of data acquisition and reporting through the utilization of available project information supported by common commercial PC hardware and software.

All formal reports documented for facility disposition and construction projects **Should** include the following basic information: official project title as it appears on the authorizing document; project WBS identification number; report date that report information is based on; and, the date the report was printed. In addition to containing the above basic information and using a graded approach, facility disposition and construction project schedules **Should** clearly indicate all scheduled activities, forecasted completion of the scheduled activities, a "Time Now" line, and the critical path activities. As applicable, all project internal, performance measure, DOE, and

31

RFCA milestones that fall within the span of the schedule **Should** also be clearly indicated on the schedule.

The following project controls and reports are the minimum periodic reports that **SHALL** be required for facility disposition and construction projects. Additional reports *may* be required as determined by authorization, funding, project specific requirements, management needs, and good business practices. This would include, but not be limited to, variance reports, milestone status reports, safety statistics, corrective actions, subcontractor performance evaluations (see Appendix F-1), etc. All regular and project specific reports **Should** be identified in the PEP indicating, at a minimum, the report title, reporting frequency, and report primary distribution.

PROJECT CONTROLS AND REPORTS

Project Performance Report

A Project Performance Report (PPR) **SHALL** be prepared for active facility disposition and construction projects on a monthly basis by the K-H Project Manager. At a minimum, the PPR provides project specific information regarding the following items:

- Cost and schedule status/variances
- Status of the projects critical path activities
- Required corrective actions and their status
- Accomplishments/achievements
- Issues/concerns
- Status of performance measures
- Status of DOE and RFCA milestones
- 60-day look-ahead issues
- The project's Estimate At Completion (EAC).

Monthly Accrual Report

An Accrual Report **SHALL** be prepared on a monthly basis for active facility disposition and construction projects. Following review and approval by the K-H Project Manager the Accrual Report is submitted to K-H Accounting. This Accrual Report provides current information for development of the project's actual cost to date, as well as, the obligated or incurred costs.

Table of Values

The single most important factor in the calculation of performance variances (e.g., Schedule Variance (SV), Cost Variance (CV)) is the "Earned Value" or Budgeted Cost of Work Performed (BCWP). The K-H Project Manager **SHALL** prepare, as part of the PEP, a "Table of Values" for active facility disposition and construction projects. The Table of Values assigns a life cycle dollar value of budgeted cost of work scheduled (BCWS) to each scheduled activity. On a monthly basis, the K-H Project Manager determines the percent complete for each scheduled activity in the PEP. The period and year to date BCWP for the scheduled activity(s) is derived from this monthly determination of percent complete.

2.3.7 DEACTIVATION ACTIVITIES AND PROCESS

Deactivation activities remove the cluster of facilities from operation and prepare them for turnover for decommissioning or conversion/release to a new use meeting applicable safeguards, hazardous category or other completion criteria. Specific deactivation activities include: IWCP development, removal of hazardous and non-hazardous materials, SNM holdup removal and emptying storage areas to reduce fire loading. Activities *may* include inventory and removal of unattached hazardous materials from the facilities and immediate areas, such as hazardous chemicals, beryllium and gas cylinders. RCRA unit closures *may* be completed or

may be placed in a RCRA stable condition. An economic disposition determination is made for unneeded property.

Deactivation activities reduce the potential liability and risks posed by excess contaminated equipment, RCRA issues and general hazards. Deactivation also results in additional baseline cost reductions by eliminating or further reducing the surveillance and maintenance activities currently required. Other activities may include the shipping of materials and waste to further deactivation within these facilities. It also *may* include removal of contaminated tooling that is easily removed and removal of clean equipment, tanks and gloveboxes. The deactivation process is controlled by four elements: characterization; tenant endpoints; deactivation endpoints; and deactivation planning.

1. Characterization – Requirements for characterization of deactivation activities are satisfied by the ISM process used during the development of the IWCP package for the deactivation activities.
2. Tenant Endpoints – Tenant activities are those activities operating within a building that do not support the Landlord functions. An example of a tenant activity is the residue processing in the plutonium facilities or the computer facility in Building 881. In order to properly plan the facility disposition work, it is necessary to establish the end state for the tenant activities. The end state **SHALL** be formally agreed to by the landlord and tenant organizations. This agreement can be as simple as a memo documenting the agreement and should include the following elements:
 - Relocation of personnel
 - Removal of excess chemicals
 - SNM holdup disposition
 - Waste removal
 - Classified property/material disposition
 - Removal of liquids/oils from equipment
 - Government property disposition
 - Disposition of records
 - Removal of hazardous and non-hazardous materials
3. Deactivation Endpoints – Deactivation endpoints encompass the end state for deactivation and the start point for decommissioning. The endpoints specify when the deactivation project is complete. Deactivation end points are required for all facility disposition projects. The end points will allow the proper planning and estimating to ensure scope between deactivation and decommissioning is not missed or duplicated. These end points also define the change in regulatory structure. When decommissioning starts, the work falls under RFCA. Deactivation activities are not governed by RFCA.

End point development is an iterative process. Most end point decisions **should** be developed during the early planning stages. However, some will have to be modified as deactivation proceeds. The end points will contain the following minimum information:

- A brief description components (equipment, gloveboxes, piping, etc.) by room, system or by work sets.
- The components will be grouped by type (gloveboxes with lathes, gloveboxes with holdup, clean gloveboxes, etc.).
- An end state will be described for each component type. For example: glovebox with a lathe and SNM holdup – accessible holdup in the glovebox will be removed and packaged. The exterior surfaces of the lathe will be clean. The lathe will remain installed. Miscellaneous materials will be removed. The interior of the glovebox will

be wiped down. All hazardous materials will be removed. The lead will remain on the exterior of the glove box. Zone 1 ventilation to the glovebox will be operational. Oils will be removed from the lathe. All liquids will be removed from the box.

- Waste information (i.e. waste left, containers, etc.)

The end points can be documented in numerous ways. For detailed end points (such as a type 3 building), a separate document may be necessary. For less detailed end points (such as a type 2 building), they could be included in the PEP. For type 1 buildings, the type 1 facility checklist in Appendix B-1 will be sufficient. The end points document will be approved by the deactivation organization and the D&D program office.

4. Deactivation Planning – Deactivation planning is documented in a PEP.

2.3.8 Mothballing

There may be situations where there is no longer a mission for a building, and it is not planned for the building to be decommissioned for several years. When this occurs, it may be cost affective to "mothball" the facility. The term mothball is defined as placing a building in a condition where it is no longer actively occupied. Ventilation, heating and air conditioning, fire detection and protection systems may be turned off. Sump pumps to remove groundwater infiltration may be operating.

It will be necessary to conduct an economic analysis to determine that if the additional cost to conduct the activities necessary to meet the requirements for the building to be placed into mothball status is less than the savings from the reduction in landlord cost.

In accordance with the DPP, Section 3.3.4, A RLCR will be submitted to the LRA prior to "mothballing" or prior to beginning decommissioning. In addition, whenever DOE chooses to "mothball" a facility, DOE will submit a hazard analysis of the facility specific conditions for the mothballed period, meet with the LRA to discuss any potential hazards or releases to the environment which might occur during the mothball period, devise actions to mitigate potential releases in collaboration with the LRA and propose adequate monitoring methods to monitor any release. Any modification to work previously approved in a decision document would be processed in accordance with RFCA, Part 10, Changes to Work.

2.3.9 DECOMMISSIONING ACTIVITIES

Decommissioning may begin either in an entire building or a part of a building. In non-nuclear facilities, decommissioning *may* begin as soon as the building's mission is at an end. In some buildings, decommissioning *may* run concurrently with deactivation and/or operations or after deactivation and operation activities are completed. Some activities described in Phase II *may* occur either during the Deactivation or Decommissioning Phase.

The following list provides examples of decommissioning activities that help delineate the portion of the disposition continuum that is regulated as decommissioning under RFCA and covered by a Decision Document. (See Section 5 and Appendix D for details regarding Decision Documents) The sequence of execution of these activities is dependent upon project specific needs and requirements.

Early in the planning stages, it will be necessary to determine how much of the underground structure will be removed during decommissioning and what will be removed by ER. In general, decommissioning will include the removal of the whole structure including slabs and footings down to three feet below grade. If contamination is found below the that area, a plan will be developed between the decommissioning and ER organizations as to when the other structural material will be removed.

Prior to the initiation of decommissioning activities, monitoring efforts (monitoring of surface water, groundwater, ecological, and air) are required to establish the baseline conditions. This effort is coordinated with the K-H Waste and Remediation Operations (WRO) and the ESS organizations. To establish good baseline conditions, this effort **Should** occur very early in the decommissioning scoping phase and **Shall** be incorporated into the Integrated Monitoring Plan (IMP) update.

Whenever possible, the subcontractor performing building decommissioning will perform the ER remediation. This strategy will reduce mobilization and demobilization time and costs, reduce procurement time, and streamline technical processes. The knowledge gained through decommissioning and lessons learned will contribute to accelerated remediation. The following list provides examples of environmental restoration or remediation activities.

SITE REMEDIATION EXAMPLES

- Monitor site for any environmental impacts
 - Cap, cover, or otherwise stabilize building slab
 - Core sampling of the building/facility for Environmental Restoration
 - Removal of the building/facility to at least 3 feet below grade
 - Disposition of Concrete and Soils
- Note: Core Sampling for establishing a baseline may need to be started prior to demolition.*

2.3.11 FACILITY TRANSITION AND LANDLORD ACTIVITIES

As part of the facility disposition process, there *may* be a need to either transfer ownership within K-H of the facility or change the operational use of the facility, or both. Facility transition is a formal process that has been documented and institutionalized in Rocky Flats Closure Project Procedure, 1-PRO-209-RPTP, Real Property Transition Procedure (RPTP). This procedure provides specific requirements, instructions, guidance, and example checklists for conducting facility transition.

The transition process requires the selection of a Facility Transition Team Manager and Facility Transition Team. The Team ensures that the required transition process is effectively and efficiently completed in accordance with the RPTP, including verification that sufficient documentation and checklist items have been completed, reviewed, and approved by all responsible parties prior to final turnover of the facility. The Facility Team Manager **SHALL** notify the DOE project coordinator early in the transition process to ensure that DOE can also transition the facility to the appropriate DOE organization.

35

The following are some of the major activities that are conducted as part of the transition effort. For Type 1 Facilities, the Type 1 Facility Checklist is completed (See Appendix B-1).

- Conduct initial facility walk-through
- Perform comprehensive facility inventory (e.g., operations, records, radiological issues, chemical hazards, etc.)
- Transfer accountable inventory (if applicable)
- Complete transition checklists
- Conduct turnover walk-through
- Resolve conflicts
- Document facility status (limitations, strengths, and deficiencies)
- Notify affected parties of the transfer
- Transfer of Life Cycle Funds via the BCP process or another approved transfer method.
- Maintain and disposition all records in accordance current Records Management Guidelines.

*NOTE: All efforts **Should** be made to coordinate these activities with the facility disposition Project Team so that efficiencies can be gained and duplication of characterization activities do not occur.*

For facilities anticipated to be, or initially listed in Appendix B-1 as a Type 1 Facility, the current Landlords **SHALL** determine if any of the following conditions exist, or are expected to occur:

- The facility is expected to be transferred to another department, or
- The facility is currently unoccupied by personnel, or
- The facility is expected to become unoccupied for a period longer than 3 months with no new mission identified.

NOTE: For Type 2 and 3 facilities, use the PEP to define transition strategies.

If any of the above conditions exist, then the current landlord **SHALL** complete the following items **PRIOR** to transitioning the facility to the new Landlord.

1. Conduct a Walkdown of the facility and complete the Type 1 Facility Checklist (Appendix B-1).
2. Review the Type 1 Facility Disposition Checklist with the D&D Program Office.
3. Produce the initial PEP for the facility. It is expected that this PEP will be substantially graded and **SHALL** contain the following sections as a minimum:
 - Type 1 Facility Checklist (Appendix B-1)
 - A brief description of the facility walkdown
 - A description of any hazards identified, controls necessary for those hazards and a brief plan to remove those hazards.
 - A budget for completing these activities.
 - A schedule showing the timing for these activities and indicating when decommissioning is expected to begin.
 - A discussion of the regulatory compliance status, and any unusual or distinctive regulatory issues associated with the facility.
4. Submit the Type 1 Facility Checklist and the PEP to the D&D Program Office for review and approval
5. Perform activities in accordance with the approved PEP.

36

Note: Completion of the checklist ensures that the new Landlord is provided with sufficient knowledge about the current conditions of the facility prior to transition. It also ensures that the facility is placed in a safe condition, including establishing monitoring and/or surveillance requirements as appropriate, in readiness for Decommissioning at a later date. Once the Project/Facility is funded for decommissioning, the Project is expected to be planned and executed in accordance with the requirements of this Manual.

3.0 PROJECT INITIATION AND SCOPING

The purpose of this chapter is to present the requirements and guidance for performing activities in the project initiation and scoping phase of the project. The objective of this phase is to initiate the project and to get agreement on a defined scope of work for the project from DOE and the LRA.

3.1 OVERVIEW

Scoping refers to the process of defining or providing a comprehensive description of the project to be performed. The scope of work refers to the project or activity baseline that defines technical objectives and general approaches in terms of design, execution, and performance requirements, criteria, and characteristics derived from what the project is intended to accomplish.

Project initiation and scoping is the first step in the facility disposition process. The key steps in this phase involve initiating the project, establishing the project team and records system, conducting the scoping characterization, defining the project scope, preparing or updating the PEP, and conducting the joint scoping meeting. The expected end result of this phase is to get agreement from DOE and the LRA regarding the defined scope of work for the project.

The first part of the scoping phase involves several activities related to project initiation. These activities include updating the CPB budget; identifying the K-H project manager; preparing the Basis of Estimate (BEST) inputs, PBDs, and FY work plans; completing the Activity Screening Form (ASF) and initiating the required Work Control Forms (WCFs); and identifying the principal subcontractor project manager.

Once the Scoping Phase is initiated, the PM **SHALL** use the Scoping checklist to track the completion of the requirements outlined in this section. The Scoping checklist **SHALL** be completed and signed by the PM and the D&D Division Manager prior to initiating Phase I planning. The Scoping checklist is located at the end of this Section.

3.2 PROCESS LOGIC FLOW

The activities involved in the project initiation and scoping phase are shown in the process logic flow diagram (Figure 3-1). The project initiation activities, shown in the left column, flow sequentially from top to bottom. However, some of these activities can actually be performed in parallel. During this phase the PEP is prepared or updated, and the scoping characterization is completed. The second column in the process flow diagram shows the activities leading to the joint scoping meeting, where agreement is reached on the defined scope of work for the project.

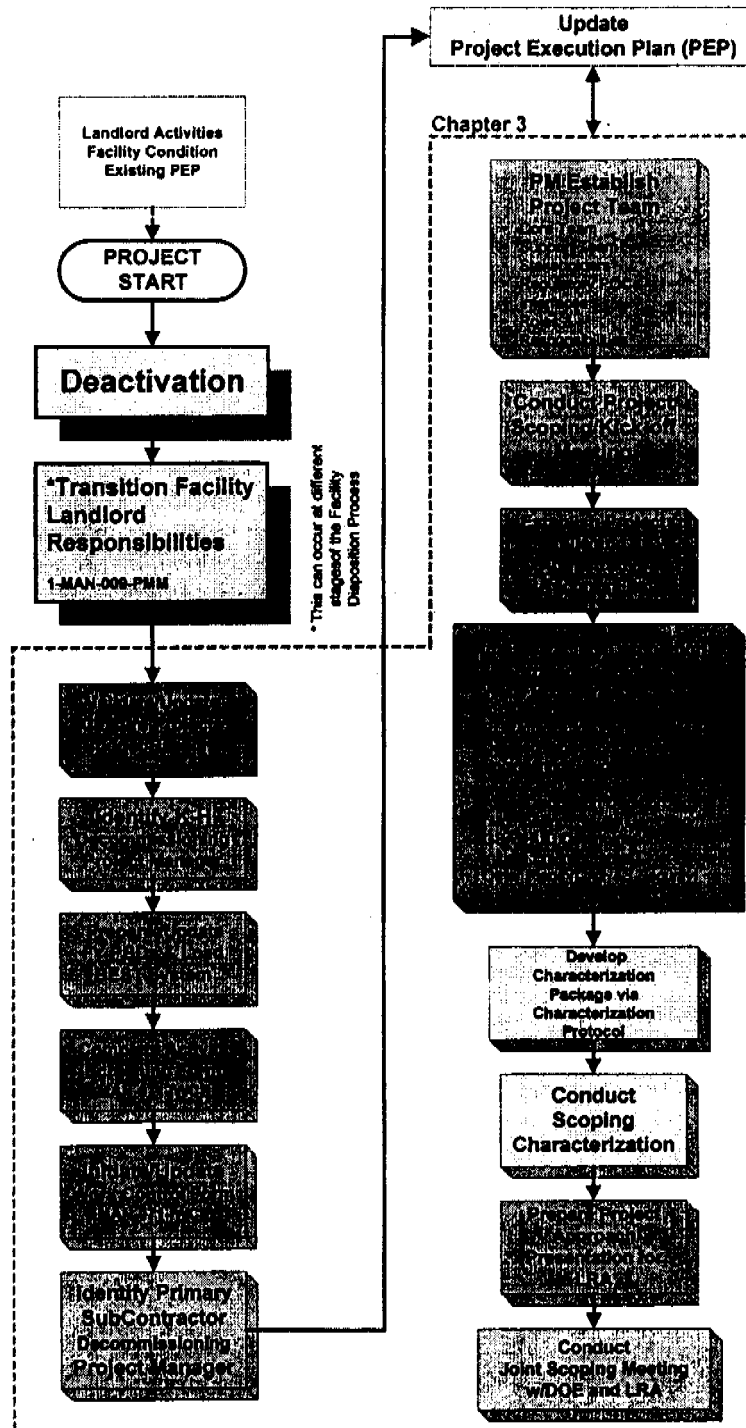
3.3 REQUIREMENTS

3.3.1 Project Initiation

Project initiation requires that the Project Manager is identified and the necessary paperwork is prepared to ensure that adequate funding and tracking of that funding is available. The following sections provide additional information with respect to project initiation.

38

Figure 3-1
PROJECT INITIATION AND SCOPING
PROCESS FLOW DIAGRAM



3.3.1.1 Identify K-H Project Manager

The applicable Vice President responsible for the facility disposition project appoints the K-H Project Manager.

3.3.1.2 Update CPB and Prepare FY Work Plan (PBDs and BEST Input)

If necessary, the CPB is updated in this phase. Based on the CPB, the K-H PM prepares/updates the project baseline documents and loads the data into the BEST system. Using this information along with the budget call guidance and other applicable documents, the FY work plan is updated for each year of the project.

3.3.1.3 Complete ASF and WCFs

The K-H PM or designee completes the ASF for the project to determine the level of planning required in accordance with the IWCP Manual, MAN-071-IWCP. In addition, the ASF will assist the PM in determining the types of safety and environmental discipline SMEs that are needed for the project team. The ASF is completed based on the scope and project definition provided in the FY work plan with assistance from select SMEs, as required. The level of planning required is based on the hazards, uncertainty, experience, and complexity of the work to be performed. It is not appropriate for every specific activity in the project to be screened using the ASF. Therefore, the following guidance is provided regarding the definition of a project and an activity to determine when the ASF is applied.

A project is defined as a specific plan or design that consists of several major tasks/activities to be completed, e.g., D&D Building 779. An activity is defined as an individual unit of work for performing a specific function, e.g., place excess equipment in storage container, decontaminate a glovebox. The ASF is applied primarily at the project level, as depicted in figure below. This will ensure that an appropriate level of planning is applied to the entire project. In some cases, it *may* be necessary to apply the ASF at the Major Task/Activity level. However, this is necessary only when the activity is a stand-alone activity and not associated with a mission/project, e.g., a major repair to a failed piece of equipment. Figure 3-2 provides a visual representation of the various levels of activities that typically exist within a project.

The K-H PM completes a WCF for the project and additional WCFs for the major tasks or activities that require individual or separate planning teams, as shown on the figure below.

3.3.1.4 Identify Principal Subcontractor Project Manager

The K-H Contractor Technical Representative (CTR) for the facility disposition project provides concurrence on the principal subcontractor project manager selected for the facility disposition project.

3.3.2 Project Scoping

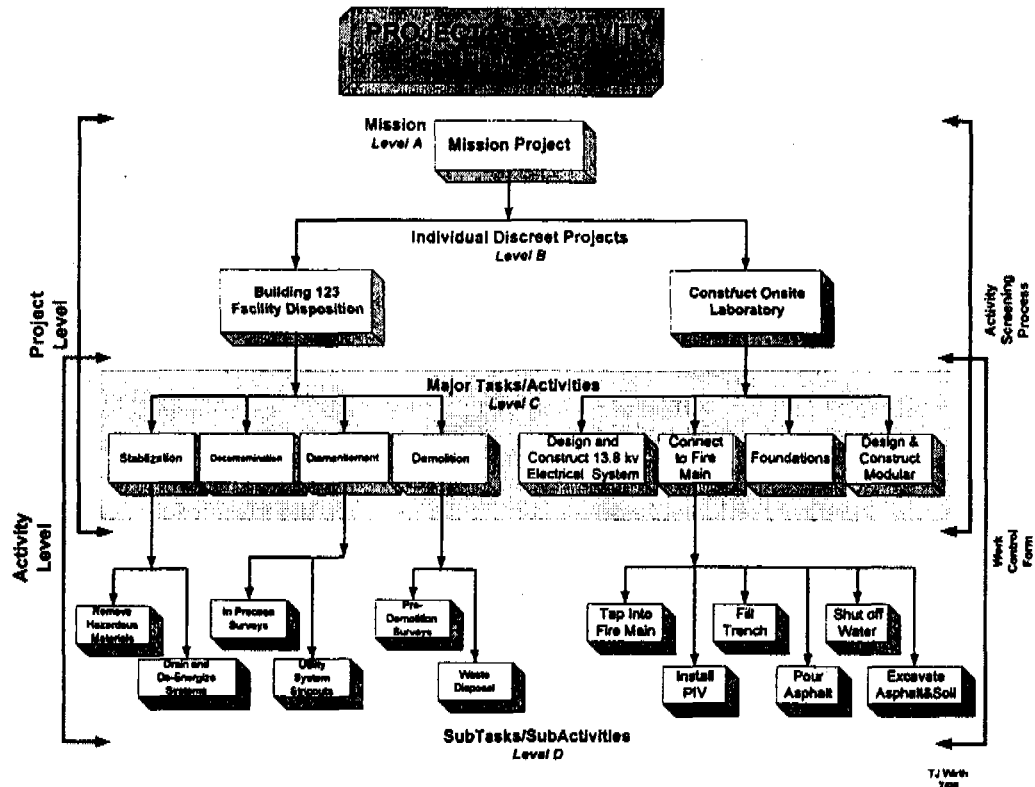
Project scoping involves preparing and updating the PEP and establishing the project team. The following sections provide additional detail on project scoping activities.

3.3.2.1 Prepare/Update PEP

Based on the information and results from the other activities performed in this phase, the K-H PM SHALL prepare the PEP for the defined scope of work of this project. If the PEP already

40

exists, or has already been prepared for the deactivation tasks prior to decommissioning, the K-H PM **SHALL** update the PEP in this phase to reflect the facility disposition tasks. The PEP template in Appendix C-1 provides guidance regarding the specific information that **Should** be included in the PEP.



3.3.2.2 Establish the Project Team

The K-H and principal subcontractor PMs **SHALL** establish the project team, which consists of a core team and a support team(s). The team members and organizations are explicitly listed with names, titles, and responsibilities for the project or a specific phase or phases. Contractual relationships and the reporting and work package/cost account authorities and responsibilities are also specified. The core team consists of the PM and several key members who are expected to participate in all aspects of the project planning and execution. The support team or teams consist of the work planners, engineers, and safety discipline SMEs planning specific parts of the projects (e.g., major tasks/activities).

The makeup of the core team and the project planning/support team(s) is dependent upon the project scope, the hazards expected to be encountered during the performance of the work, the uncertainty of the project/activity scope and hazards, and the complexity of the project/activity. The previously completed ASF provides the PM with a first cut of the SMEs that **Should** be considered while establishing the planning team(s). The core team **Should** solicit involvement of the support team as early as possible in the project, especially in the initial project meetings. Typical and representative (but not all inclusive) team members for the core team and the support team are shown below.

41

Typical Core Team Members

- K-H PM
- Principal Subcontractor PM
- QA/QC
- Construction Management (lead)
- Facility Manager (or representative)
- Facility Operations (lead)
- Cost Estimator/Project Cost Analyst
- Safety Analyst (lead)
- Administrative Support
- Environmental Compliance Project Manager
- Waste Management

Typical Support Team Members

- Engineering/Engineering Support
- Crafts (Hourly Workers)
- Safeguards and Security
- Emergency Preparedness/Management
- Nuclear/Criticality Safety
- Project Engineer (lead)
- General Counsel (legal)
- Operations Support
- Environmental Restoration
- Radiological & IHS Specialists
- Procurement
- Transportation
- ESS (SME for multi-media environmental compliance)

It is important to note that as the facility moves through its planning and execution phases membership of the team *may* vary with the needs of the project. However, in order to ensure continuity and efficiency of the project, the core team **Should** be identified and assigned for the duration of the project.

In any given project, there *may* be more than one team necessary to plan the work. Figure 3-3 provides an overview of the various types of teams that *may* be established to ensure all the work associated with the project/activity is adequately anticipated and ready to be performed.

3.3.2.2.1 Team Member Roles and Responsibilities

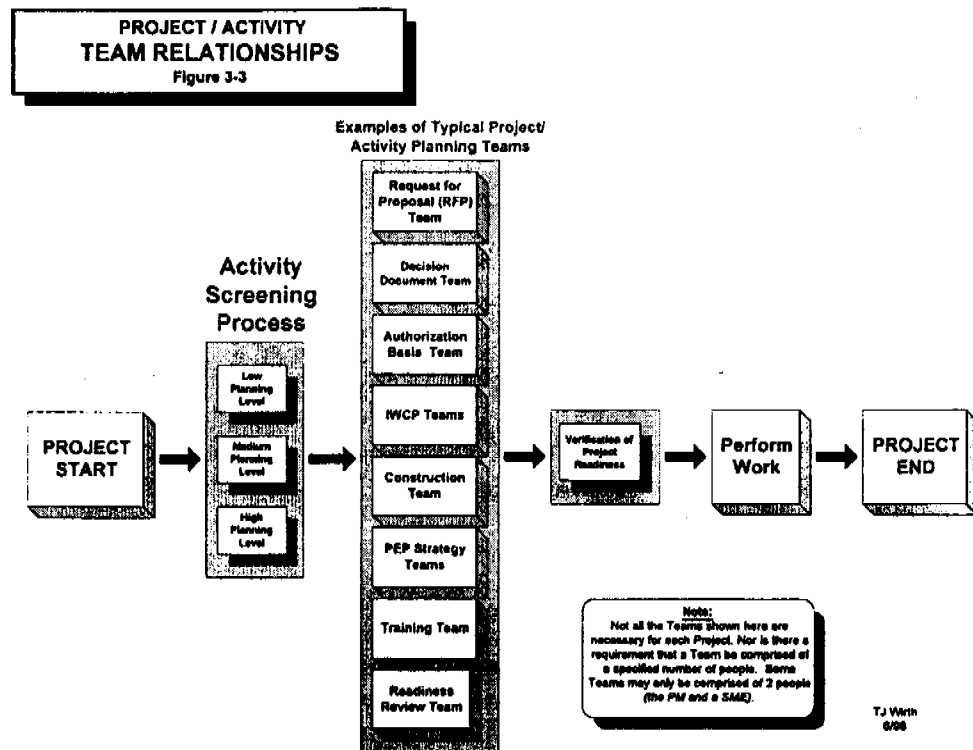
The K-H PM is responsible for project budgeting, funding authorization, and project oversight. The specific contractual responsibilities of the K-H and Principal Subcontractor PMs will be identified in the appropriate documents. The K-H PMs is the single point of contact for K-H organization interface with the project.

Some projects require multiple teams for specific or unique activities. In those cases where multiple teams are required, single points of contact **Should** be identified as interface points between teams to disseminate information and to establish team hierarchy.

The K-H PM, supported by the core team, identifies, documents, and resolves organizational turnover issues relating to project responsibilities for a facility. The project team coordinates with the facility transition team if the transition occurs during the facility transition project in accordance with the RPTP. The facility transition acceptance checklist prepared by the facility transition team is reviewed by the project team. Any administrative or AB changes for turnover to the project team are identified by the K-H PM (see Section 2, Section 2.5 Facility Transition). For each established team, the teams roles and responsibilities **Should** be identified and documented to include the following:

TEAM MEMBER ROLES AND RESPONSIBILITIES

- Identification of stakeholders
- Agreement on working schedules
- Selection of team members for all aspects of the activity
- Priority of maintaining team continuity and minimizing team member turnover
- Identification of training requirements/qualifications
- Identify specific roles and responsibilities for each team member
- Identify part-time SMEs for areas with weak coverage by full-time team members



3.3.2.2.2 Team Member Qualifications

Team members **Should** have a combination of individual and collective experience and education to provide adequate expertise about the project/activity under consideration. The team can include members from the primary and principal subcontractors, including floor-level workers and SMEs where appropriate, and where such inclusion is required, to reach quality decisions about safety and hazard controls.

The members of the project teams **Should** be qualified and empowered by the organization which they represent to provide prompt response and input in technical and policy areas related to that organization's responsibilities. Upon completion of the process, the team membership, deliberations, and decisions are documented and included in the project/activity document files. Instructions for completing the Team Credentials Report are provided in the IWCP, Activity Screening Process.

3.3.2.2.3 Regulatory Interface

The DOE, CDPHE, EPA, and DNFSB **Should** have identified points of contact, and will typically have an "observer" status within the project team. They **Should** be contacted and invited to routine project meetings. The LRA project point of contact should be consulted to determine which types of meetings they are interested in attending.

The project team **SHALL** interface with the K-H D&D Program Office to identify regulator issues and develop regulatory strategy. The K-H D&D Program Office **SHALL** interface with the RFCA Project Coordinator to facilitate resolution of regulatory issues. The DOE project point of contact is the single point of contact with the regulatory agencies; however, the K-H PM will

typically have significant communication with the regulators. It is important that the DOE project point of contact be kept aware of all significant communications between the K-H PM and regulators. The K-H PM is responsible for following the Site policy in the preparation of contact records.

3.3.3 Initial Project Kickoff Meeting

The project team **Should** address and discuss the following items at the initial project kickoff meeting. Some of these issues **may** not be applicable to all projects.

PROPOSED PROJECT KICKOFF MEETING AGENDA ITEMS AND ISSUES

- Scope of project (WBS, endpoints, milestones, interfaces, uncertainties, key strategies)
- Project organization (chart, responsibilities, and Site and regulatory interfaces)
- Facility transition status (if needed)
- Facility characterization status.
- Potential deviations from the Site baseline identified to date.
- Status of budget and relevant BCPs for planning and execution.
- The acceptance checklist and any administrative or AB changes for turnover.
- Deactivation or other to be performed outside the scope of RFCA occurring within the same building.
- Functions or equipment moving or vacating the building, and any timing or schedule implications.
- Initial key requirements, and how final requirement sets will be identified.
- Significant uncertainties that currently exist that could affect the performance of the project/activity (including project/activity characterization information).
- Initial decision document strategy. This **may** include facility type; initial waste management strategy; initial contractual approach; initial equipment disposition strategy; and other initial approaches for key activities. This item **Should** include responsibilities of individuals in this process, and regulatory interfaces.
 - Unique or different strategies to be considered by the project.
- Potential project performance criteria, types of performance measures, milestones, and critical decision points.
- Records management
- Meeting minutes **SHALL** be taken and distributed to applicable organizations and any issues evaluated or analyzed and identified as action items.
- Schedule milestones/performance measures

3.3.4 Establish Records Management/Configuration Control System

The establishment of project files, record management, and configuration control methods **Should** be initiated early in the project. They are maintained and followed throughout the project in accordance with the PEP and the Site QAP. These files and methods support regulatory compliance, project management and control, legal and DOE Order Compliance, communication, product quality, and verification of successful completion. Project closeout includes closeout of project files and disposition of records and files. Appendix A-1 provides a standardized file index and records completion checklist for all D&D projects.

The project team establishes a project configuration control and document management process, as described below. The project team develops a project document hierarchy to assist in the planning process. The Project Deliverables Matrix, Appendix A-2, **SHALL** be used to

establish what documents are needed for project files, controlled documents, and administrative records. The Project Deliverables Matrix (Appendix A-2) identifies:

1. The phase of planning in which the item **Should** be initiated
2. Whether it's a project milestone
3. The type of document or record it is, e.g., controlled, AR, or project
4. The implementing procedure and driver document, e.g., RFCA, DPP, and DOE Order

It is important to note that many items on the list are developed simultaneously. Additionally, many have similar or identical information in the body of the document. All documents **Should** be consist, accurate, and minimize duplicative information. The D&D Advanced Planning Manager will provide a trained technical writer to assist the project team in the development of the documents. Work Control Documents **Should** be minimized to aid the Project Team in providing training, placement on Plan-of-the-Day (POD) and execution of work.

The Project Team establishes the necessary and appropriate items listed on the Project Deliverables Matrix (Appendix A-2), and the Document Review/Approval Matrix (Appendix A-3) is completed prior to execution. The K-H PM documents concurrence with this list. This ensures that all necessary planning elements and work control documents are in place for the specific scope of work prior to execution.

DOCUMENT MANAGEMENT PROCESSES

Administrative Record

Identify documents, which are retained and provided as part of the formal project-specific administrative record file in accordance with Section 4.4 of the RFCA Implementation Guidance Document and 1-F78-ER-ARP-001, CERCLA Administrative Records Program.

Project Files

Official and permanent files are established and maintained by the K-H Project Manager. The project files **will** be properly identified, protected, transmitted, distributed, retained, retrieved, maintained, and dispositioned based on the requirements established in the PEP and consistent with 1-V41-RM-001, Records Management Guidance for Records Sources. Engineering documents are controlled in accordance with Site Engineering Requirements Manual (SERM).

Meeting Minutes/Contact Records

Establish an approach for development and distribution of meeting minutes. This approach **Should** include standard distribution lists and formats. Formal correspondence **SHALL** be maintained in accordance with 1-11000-ADM-003, Correspondence Control Program. Meeting minutes with the regulators (LRA) are documented in the AR file.

Document Development and Review

Project document development and review is to conform to the Site Document Requirements Manual (SDRM).

Project Controls and Reports

Project controls and reports are documented in accordance with the requirements established in the PEP (see Section 2.3.4).

Other Document Control

Project QA requirements are established based on a graded approach. Analytical data quality, program data quality, and NQA-1 elements **Should** be considered and developed as necessary.

45

3.3.5 Develop WBS/ WBS Dictionary

A critical activity early in the Scoping process is the development of the WBS and WBS Dictionary for the project. The WBS is the framework on which the estimating and schedule data are organized. It **Should** be developed to an initial level which provides detailed identification of the scope of activities within the Scoping and Phase I Planning phases, and sufficient detail for the Phase II Planning and Execution efforts to support rough-order-of-magnitude cost and schedule estimates. The cost coding structure **Should** also be developed at this time, consistent with the WBS. The WBS and project control requirements for decommissioning are discussed in detail in Section 2.3.4

3.3.6 Scoping-Level Characterization

Scoping-level characterization effort is intended to provide a general idea of the work and facility condition, the general types of hazards involved, the issues, holes in the data, and the needs for subsequent characterization activities. The scoping characterization activities provide input into the PEP and the RLC. An overview of the entire characterization process for facility disposition projects, and how scoping fits into that process, is discussed in Section 2. Guidance for implementation of the scoping characterization requirements is provided in DDCP.

3.3.6.1 Develop Characterization Plan

The project team **Should** develop a characterization plan for all the activities related to the scoping-level characterization task. This plan **Should** include a list of specific characterization activities and checklists, responsible individual(s), and a due date. Any specific formats, if required, for work products **Should** be specifically included in the plan.

3.3.6.2 Historical Records Search and Data Compilation

The project team **Should** perform searches, interviews, and data gathering based on a planned approach that ensures consistency of effort. The project **Should** use checklists developed in conjunction with the characterization plan. The focus of this activity **Should** be the identification of historical activities occurring in the facility, history of abnormal events (e.g., spills and accidents), the facility condition, the facility hazards, and significant uncertainties, which will require further characterization. The project team **Should** attempt to establish initial or presumptive levels, types, and locations of contamination based on historical and current documentation.

Information learned from this characterization activity will provide references, contacts, and interfaces for future characterization activities regarding information sources and types of information expected to be available.

3.3.6.3 Facility Characterization Checklists (for walkdowns)

Based on the characterization plan, the historical records search, and an understanding of facility risk, system functionality and degradation, and landlord issues; the project team **Should** develop a facility scoping characterization checklist to ensure the facility walkdowns are productive. An example of items to be considered for the walkdown checklist is provided below.

46

EXAMPLE SCOPING CHARACTERIZATION WALKDOWN

Preparation

- Review of engineering drawings: layout, structural, mechanical/HVAC, process
- Estimate data for glovebox volume
- Interviews and discussions of past operations, spills, incidents
- Review of operational radiological surveys
- Expected list of contaminants, hazards, OSHA and IH issues (by room or sets)
- Expected removal approaches
- Organization of work elements
- Prepare specific checklist
- Identification of rooms/areas to be inspected
- Review of AB and identification of safety systems impacting turnover, immediate work, and to be evaluated for adequacy to perform
- Identification and procurement of necessary Radiological Work Permits (RWPs), other safety preparation
- Identification of RCRA Units or areas/items with permit considerations
- Disciplines/individuals required; photography, video, or other data gathering

Walkdown

- Identify excess equipment and materials for transfer to PU&D
- Condition of equipment
- Arrangement, discoloration, painting, or deterioration indicative of contamination spills
- Location of equipment, access, congestion, height, etc. which will require specialized equipment or scaffolding, and increase work difficulty
- Consistency of measurements or data with actual conditions; equipment not shown on drawings (or shown and absent); walls changed, etc.
- Ventilation considerations
- Identification of potential sample locations, areas
- Legacy waste, orphan/excess equipment, trash, etc.

Post-Walkdown

- Comparison of data and identification of discrepancies
- Description of layouts and identification of issues
- Preliminary sample area identification
- Develop and issue walkdown report

3.3.6.4 Facility Walkdowns

The project team **Should** include the appropriate personnel on the walkdowns to ensure completion of checklist items and to assist in identifying additional issues based on observations and the facility condition.

Using the checklists previously developed, the project team's assessment **Should** include, at a minimum, the following issues: radiological conditions; waste chemicals; RCRA unit status; stored waste; idle equipment status; project logistics issues (staging areas, waste staging, etc.); potential impacts to surface water, ground water, and ecology (e.g., birds nesting); potential release of radionuclides to air; and presence of any other hazardous material or condition.

During this walkdown, the project team **Should** identify and document the general types and locations of the key facility hazards.

3.3.6.5 Summary of Results

The project team **Should** develop a written summary of the facility characterization activities as a result of the facility walkdown. The purpose of the summary is to prepare for the joint scoping meeting and provide a document as a starting point for further characterization. This summary **Should** include the following:

- Facility condition
- Operational historical
- System functionality
- Stored Waste, RCRA Unit, Idle Equipment status, and Tank Management
- Preliminary hazards identification (radiological, chemical, industrial)
- Individual Hazardous Substance Sites (IHSSs) or other areas identified as potentially contaminated that are associated with the project (i.e. UBCs, PACs, etc.)
- Environmental interfaces or issues other than IHSS locations
- Status of past/current hazards reduction activities
- Expected future hazards reduction before decommissioning begins

The project team **Should** include in the summary any key issues which must be addressed in the RLC activities during Phase 1 Planning. This **SHALL** include initiating the DQO process.

3.3.7 Joint Scoping Meeting

Upon completion of the Project Team's initial kick-off/scoping session, the DOE project point of contact **SHALL** be notified that the external scoping meeting should be scheduled. A presentation outlining the scope of the project will be presented for discussion and consultation with DOE and the LRA in the Joint Scoping Meeting. The purpose of the Joint Scoping Meeting is to coordinate RFCA and other requirements (e.g., Integrated Monitoring Plan, DNFSB, special projects, etc.), attain agreement on the project scope (action) and the type and content of the decision document. Joint Scoping Meeting invitees typically include: K-H and its principle subcontractors, EPA, CDPHE, and as appropriate, the DNFSB.

Note: The LRA may choose to invite other regulatory agencies, as needed, to support the joint scoping session.

The scoping issues/items listed in the table below are representative of the topics for discussion in the joint scoping meeting. The level of detail and determination of scope for this meeting **Should** be graded to the project and the facility type. Therefore, not all of these issues/items apply to every scoping meeting. Examples of representative issues/items for the joint scoping meeting are shown below, divided into two groups: informational and consultative.

EXAMPLE/REPRESENTATIVE JOINT SCOPING MEETING ISSUES/ITEMS

Informational

- The purpose of the project/activity or work (objective and principal driver; why the project/activity is being performed).
- Project organization (chart, responsibilities, and Site and regulatory interfaces)
- History of the building operations.
- Record management and configuration control systems established.
- WBS extended to an appropriate level.
- Strategies for isolating utilities, processes, & systems for safe shut down.
- Strategies for Nuclear Safety AB.
- Identification of additional resources that *may* be needed for the activity/project.
- Initiate Environmental Checklist (Waste, Water, Air, NEPA, Ecological, potential ARARs, etc.).
- The type of project/activity or work being performed (i.e. deactivation and decommissioning, demolition, environmental restoration).
- Input identified for the RLC.
- Significant uncertainties that currently exist that could affect the performance of the project/activity (including project/activity characterization information).
- Project and regulatory interfaces (e.g., this project/activity could have interfaces with other activities in the same location).
- A description of the major work steps, phases, or elements.
- Scope of project (WBS, endpoints, milestones, uncertainties, key strategies)
- Initial levels, types, and locations of contamination based on historical and current documentation.
- Principal types of hazards directly involved with project/activity or expected to be encountered during performance of project/activity (keeping this assessment at a high level).
- Strategies for decontamination, deactivation of equipment and processes.
- Volumes, types, and methods for handling the various types of wastes encountered and/or generated (i.e. waste management strategies).

Consultative

- The starting and end points for the project/activity (project/activity boundaries).
- Permitting strategies (e.g., RCRA, etc.).
- Proposed facility type.
- Proposed Decision Document required: Type (i.e., PAM, DOP, IM/IRA, RSOP), content, and public comment period.
- Initial performance standards and potential ARARs
- Identification of regulatory authorities & decision-makers (RFCA, EPA, CDPHE, DOE, etc.).
- Schedule for regulator review periods

3.3.7.1 Prepare for Joint Scoping Meeting

Upon completion of the project scoping activities in this phase, a presentation, outlining the applicable issues/items **Should** be prepared for the Joint Scoping Meeting with DOE and the LRA. The project team supports the K-H and Principal Subcontractor PMs in the development of the presentation that covers the informational and consultative issues/items previously discussed.

Before the Joint Scoping Meeting can occur, the D&D Division Manager, **SHALL** determine that the level of project development is adequate, that the facility hazards are sufficiently well understood, and that the all of the applicable scoping issues/items are adequately addressed.

3.3.7.2 Conduct Joint Scoping Meeting

The LRA, DOE, and selected members from the project team (lead by the K-H and Principal Subcontractor PMs) **SHALL** conduct the Joint Scoping Meeting. The K-H and principal Subcontractor PMs, in coordination with DOE, **SHALL** make a presentation of the issues/items prepared in the previous task. The consultative issues/items **Should** be presented as items open for discussion at the meeting.

As an elaboration to the consultative issues/items listed in the table above, the project team **SHALL** be prepared to discuss the following three key issues during the Joint Scoping Meeting:

- Environmental strategy – This is a discussion of the various environmental and ecology requirements and potential impacts, protection and the necessary path forward. Included in this discussion will be a review of RCRA Closures, regulatory and permit requirements, monitoring issues and other potential environmental concerns.
- Identification of requirements that would be waived under the CERCLA process and justification of how the substantive elements (i.e. standards, requirements, criteria, and limitations) would be met. This information would be formalized in the decision document, if applicable. The following are examples of what **Should** be considered: waste storage, general stormwater permit for construction activities, RAD/NESHAP, wastewater handling vis-à-vis then-available treatment facilities, and impacts of project stormwater runoff.
- The initial, proposed list of potential ARARs, including highlighting of specific differences from other D&D projects. The listing of potential ARARs identified in the RFCA Implementation Guidance Document, Appendix K, **Should** be consulted.

Meeting minutes **SHALL** be taken and distributed to applicable organizations and be placed in the AR file by the K-H PM. Any key issues to be evaluated or analyzed will be identified as action items in the meeting minutes. Action items from the meeting **SHALL** be formally dispositioned.

50

SCOPING CHECKLIST			
Project:	Project Manager:		
Activity	Exemption from D&D Division Manager	Date Completed	Signature
1. Validate and update closure projects budget baseline. (FDPM, 3.3.1.2)			
2. Prepare and/or update fiscal year PBDs and load BEST system. (FDPM, 3.3.1.2)			
3. Complete activity screening form, MAN-071-IWCP. (FDPM, 3.3.1.3)			
4. Initiate and/or update work control form, MAN-071-IWCP. (FDPM, 3.3.1.3)			
5. Identify primary subcontractor and obtain K-H CTR concurrence on principal subcontractor PM. (FDPM, 3.3.1.4)			
6. Establish project team, both core and support team members. (FDPM, 3.3.2.2) Attach a copy of the project team contact list to checklist			
7. Identify single points of contact as interface points between groups to disseminate information. (FDPM, 3.3.2.2.1)			
8. Identify and document team roles and responsibilities. (FDPM, 3.3.2.2.1)			
9. Prepare or update PEP in accordance with the guidance in Appendix C-1 of the FDPM. (FDPM, 3.3.2.1)			
10. Identify DOE, CDPHE, EPA, and DNFSB points of contact for the project. (FDPM, 3.3.2.2.3) Attach a copy of the project team contact list to checklist			
11. Identify regulator issues and develop regulatory strategy with DD Program Office. (FDPM, 3.3.2.2.3)			
12. Conduct project scoping and kick-off meeting. (FDPM, 3.3.3)			
13. Establish project file and administrative record. (FDPM, 3.3.4) Attach a copy of the proposed project deliverables matrix, project file index, and document review/approval matrix			
14. Identify the project technical writer. (FDPM, 3.3.4)			
15. Develop WBS and WBS dictionary. (FDPM, 3.3.5)			
16. Develop scoping characterization package in accordance with D&D Characterization Protocol. (FDPM, 3.3.6) <ul style="list-style-type: none"> Was a plan developed? Were historical records search and data compiled? Were facility characterization checklists used? Was a facility walkdown conducted? 			
17. Develop a written summary of the facility characterization activities. (FDPM, 3.3.6.5)			
18. Develop initial project approach and prepare presentation outlining the scope of the project. (FDPM, 3.3.7.1)			
19. Submit presentation to D&D Program Office for a determination if the project development is adequate. (FDPM, 3.3.7.1).			
20. Participate in joint scoping meeting. (FDPM, 3.3.7.2)			

51

SCOPING CHECKLIST			
Project:		Project Manager:	
Activity	Exemption from D&D Division Manager	Date Completed	Signature
21. Take and distribute joint scoping meeting minutes to applicable organizations and place in AR file. (FDPM, 3.3.7.2)			
22. Formally disposition action items from the joint scoping meeting. (FDPM, 3.3.7.2)			

Checklist Complete:

Kaiser-Hill Project Manager (print/sign)

Date

Approval to proceed to Project Close-out:

Kaiser-Hill D&D Division Manager (print/sign)

Date

52

4.0 PHASE I PLANNING

The purpose of this chapter is to present the requirements and guidance for performing the Phase I Planning activities of the project. The objective of this phase is to confirm the facility type and continue the facility characterization process through the RLCR; and to update the PEP with expanded scope details based on the additional characterization, engineering studies, and engineering assessments.

4.1 OVERVIEW

This chapter defines the requirements for facility characterization that ultimately lead to the preparation of a RLCR. Prior to this planning phase, the project scope in the PEP has been defined and the joint scoping meeting has been conducted. At the completion of Phase I Planning, the project has LRA concurrence of facility type, adequate information to support the development of engineering design packages has been developed, and a reasonable certainty of the scope and methods to accomplish the project have been defined in the updated PEP.

One of the planning activities in this phase includes establishing the method of accomplishing the scope and evaluating project decisions necessary to develop DQOs. Further feasibility studies are performed to validate these methods in parallel with the RLC. At completion of the RLC, and in parallel with developing the RLCR, additional field data will be factored into the work planning through engineering studies/assessments and feasibility studies to establish the baseline scope and approach for the project.

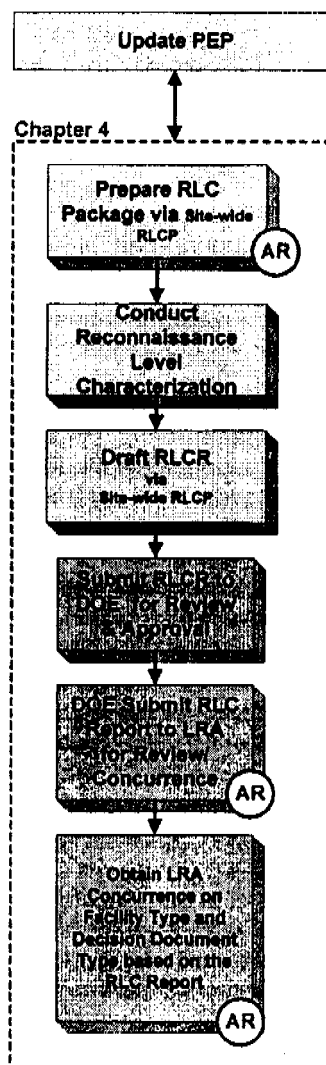
The characterization activities performed in this phase include the development of the RLC Package, coordination with the work planning and scoping activities, conducting the field characterization, development of the RLCR, and submittal of the RLCR through DOE for concurrence by the LRA.

Once the Phase I Planning is initiated, the PM **SHALL** use the Phase I Planning checklist to track the completion of the requirements outlined in this section. The Phase I Planning checklist **SHALL** be completed and signed by the PM and the D&D Division Manager prior to initiating Phase II planning. The Phase I Planning checklist is located at the end of this Section.

4.2 PROCESS LOGIC FLOW

The Phase I Planning activities are shown in the process logic flow in Figure 4-1. As discussed earlier, the project initiation and scoping activities have been completed prior to this phase of the facility disposition process. The list of Phase I Planning activities, as shown in the flow diagram, flow sequentially from top to bottom. The development of the PEP is shown as a long-bar at the top of the process flow diagram and encompasses the entire project life. During this phase, the PEP developed in the project initiation and scoping phase is updated and the RLC is developed, reviewed, and approved by DOE with concurrence by the LRA. The process flow diagram shows that the results from the RLC are used in the Phase II Planning and Engineering activities. In addition, the results from the confirmation of the facility type are used as the basis for developing the required RFCA Decision Document (e.g., DOP, IM/IRA, or PAM).

Figure 4-1
PHASE I PLANNING
PROCESS FLOW DIAGRAM



54

4.3 REQUIREMENTS

4.3.1 Update PEP

Based on the information and results from the Phase I Planning activities, the principal subcontractor PM prepares an update to the PEP developed for the project in the previous phase. The RLC, engineering assessments, and feasibility studies provide the key input for this update. Specific information to be provided in this updated PEP are listed and discussed in Section 2 and Appendix C-1. The following sections provide additional requirements and guidance for updating the PEP during this phase of the project.

4.3.1.1 Preliminary Engineering Options Analyses

Engineering options analyses are the actions that support decisions between programmatic or technical alternatives. Not all activities in the planning and execution will present issues or require unique decisions; many activities will be nearly identical to activities in other projects or routine site activities. Where previous performance was adequate, further analysis is not required. Where previous performance was inadequate, new technology or approaches offer opportunities, unique features present problems, or uncertainties pose questions, the project **Should** identify as many options as reasonable to minimize having to revisit the issue at a later stage of planning or execution. The results of options analyses will be better defined in (and backup to) the Methods of Accomplishment Section of the PEP, definition of trade-off and engineering studies in subsequent planning, and identification of information required during characterization.

The project team identifies significant technical issues, based on knowledge of facility and the scoping-level characterization. These issues may be significant due to safety and environmental issues, cost impact (decommissioning or landlord), interface with other in-building organizations, differences or similarities with other projects, lessons learned, level of uncertainty, and integration with other Site projects (e.g. resources).

4.3.1.2 Develop Contracting Strategy

In order to support planning and project execution, it is important that the project team begins to develop their strategy towards performing and executing the work. In this planning phase, the project team further develops the contracting strategy discussed in the joint scoping meeting. This could include: type of pricing, who is performing work (in-house, use of bargaining unit or building trades personnel). The project team continues to perform Davis-Bacon determinations (in accordance with the Davis-Bacon Process, 1-90000-ADM-9.05), as necessary, and develop RFPs required to avoid project delays.

When selecting subcontractors, the project team **SHALL** consider the subcontractor's ability and need to meet the requirements of the Site Health and Safety Program, Site Environmental Stewardship Program, and the Site QAP. This process will be conducted by utilizing the established Site procurement process for the selection of subcontractors.

4.3.1.3 Develop Waste Management Strategy

In order to support Phase I planning, and to assess the impacts of waste generation on waste management and transportation, it is important to have a project waste management strategy, as early in the project as possible. In this Phase, the project team updates the waste estimates included in the CPB and any additional assessments. The project team defines the scope of

55

activities leading to the development of a Waste Management Plan based upon the results of the RLC, decontamination waste, and volume reduction evaluations required by the final PEP. The Waste Management Plan can be a separate document, or a section or attachment to the PEP.

4.3.2 Reconnaissance Level Characterization

Reconnaissance level characterization is performed to establish a definitive baseline of information when planning for decommissioning of Type 1, 2, and 3 facilities. This phase includes a review of information to establish a definitive baseline of contamination, hazards, and facility condition necessary to complete the planning effort. An overview of the entire characterization process for facility disposition projects, and how RLC fits into that process, is discussed in Section 2. Guidance for implementation of the scoping characterization requirements is provided in the DDCP.

4.3.2.1 Prepare a Reconnaissance Level Characterization Package

Per the RLCP, an RLC Package is prepared to establish the survey and sampling instructions for facility characterization for Type 1, 2, and 3 Facilities. The Package follows the guidance provided in the RLCP and outlines the sampling and survey methodology for characterization by defining the type, quantity, condition, and location of radioactive and hazardous materials.

4.3.2.2 Conduct Reconnaissance Level Characterization

Following preparation of the RLC Package, facility walk-downs are conducted by a team consisting of K-H D&D Program representatives and any other Site party directly affected by the disposition, such as, operations, deactivation, decommissioning, engineering, health and safety, radiation protection, nuclear and criticality safety, ESS, and safeguards and security.

The radiological and chemical (including PCBs and asbestos) condition of the facility are assessed in order to identify radioactive or hazardous waste storage areas, contaminated areas and hazards, as well as physical safety hazards or other conditions that could affect decommissioning activities.

4.3.2.3 Prepare Reconnaissance Level Characterization Report

A RLCR **SHALL** be prepared to document the results of the information gathered during the characterization effort and subsequent engineering studies and assessments, and to recommend the facility classification. This report provides the results, summarizes the hazards and risks associated with them and provides adequate detail to allow DOE to determine the facility classification. The RLCR **SHALL** follow the guidance provided in DDCP. The RLCR **Should** include:

- An executive summary, which provides a general overview and summary of the report.
- An introduction, which describes the purpose, scope and content of the report.
- A summary of characterization/survey activities, which describes the DQOs, sampling and field measurement/survey methods, procedures and equipment, and laboratory analysis.
- A review of the building/cluster operating history, which describes the history of the buildings, past and current operations, and a physical description of the building.
- An identification of building hazards (e.g., physical, radiological chemical, asbestos, pressure vessels, electrical, wastes, etc.).

56

- A discussion of decommissioning waste types and waste volume estimates.
- A discussion regarding data confirmation and a review of data quality assessments.
- A discussion supporting the recommendation on final facility type and a discussion regarding the next step in the facility disposition process including alternative assessments and engineering studies.

4.3.2.4 Submit RLCR to DOE for Review and Approval

Once characterization has been completed and a draft RLCR has been prepared, the RLCR and cover letter determination of requesting facility classification **SHALL** be forwarded to D&D Projects and project team representatives for review. Following comment resolution, the RLCR is approved by the D&D Projects Division Manager and submitted to DOE for review and approval. The level of detail and content is evaluated to assure compliance with the DDCP. Once approved by DOE, DOE submits the RLCR to the LRA.

4.3.2.5 DOE Submits RLCR to LRA for Review and Concurrence

The RLCR is forwarded by DOE to the LRA; the LRA has 14 calendar days to review the RLCR and the facility type classification. The completed RLCR and the concurrence letter from the LRA, if available, are placed in the project-specific administrative record file. The facility type confirmation is used as a basis for developing the required RFCA Decision Document in the Phase II Planning and Engineering. The LRA may concur, nonconcur, or not respond to the RLCR submittal. No response from the LRA after 14 days is considered approval.

PHASE I PLANNING CHECKLIST			
Project:	Project Manager:		
Activity	Exemption from D&D Division Manager	Date Completed	Signature
1. Update PEP. (FDPM, 4.3.1)			
2. Develop contracting strategy. (FDPM, 4.3.1.2) Assess subcontractor ability to meet the RFETS health and safety and quality assurance requirements.			
3. Develop waste management strategy. (FDPM, 4.3.1.3)			
4. Develop reconnaissance level characterization package in accordance with the Site-wide Reconnaissance Level Characterization Plan. (FDPM, 4.3.2.1)			
5. Conduct reconnaissance level characterization in accordance with reconnaissance level characterization package. (FDPM, 4.3.2.2)			
6. Prepare Reconnaissance Level Characterization Report and complete reviews specified in document review matrix. (FDPM, 4.3.2.3)			
7. Submit reconnaissance level characterization report to DOE for review and approval. (FDPM, 4.3.2.4)			
8. After LRA review and concurrence, place reconnaissance level characterization report and concurrence letter in the administrative record file. (FDPM, 4.3.2.5)			

Checklist Complete:

Kaiser-Hill Project Manager (print/sign)

Date

Approval to proceed to Project Close-out:

Kaiser-Hill D&D Division Manager (print/sign)

Date

58

5.0 PHASE II PLANNING AND ENGINEERING

The purpose of this chapter is to present the requirements and guidance for performing the Phase II Planning and Engineering activities of the facility disposition project just prior to project execution. The objective of this phase is to complete all the engineering, work planning, and authorization basis activities leading up to the readiness determination and final work preparations in the project execution phase. A major activity in this phase is to finalize and approve the PEP for work execution, which includes finalizing all the engineering design and scope determinations and the contracting strategy to update the PEP with expanded scope details based on the additional characterization, engineering studies, and engineering assessments.

5.1 OVERVIEW

Phase II Planning and Engineering is the culmination of many planning activities started in the two previous chapters, Scoping and Phase I Planning. In addition, several new activities related to work authorization and preparation for execution are completed. The key elements of this chapter are listed below:

- Finalizing and approving the PEP
- Finalizing the contracting and procurement strategy
- Developing the work control documents
- Completing the AB documents
- Completing the RFCA Decision Documents

Once the Phase II Planning is initiated, the PM **SHALL** use the Phase II Planning checklist to track the completion of the requirements outlined in this section. The Phase II Planning checklist **SHALL** be completed and signed by the PM and the D&D Division Manager prior to initiating Execution Phase. The Phase II Planning checklist is located at the end of this Section.

5.2 PROCESS LOGIC FLOW

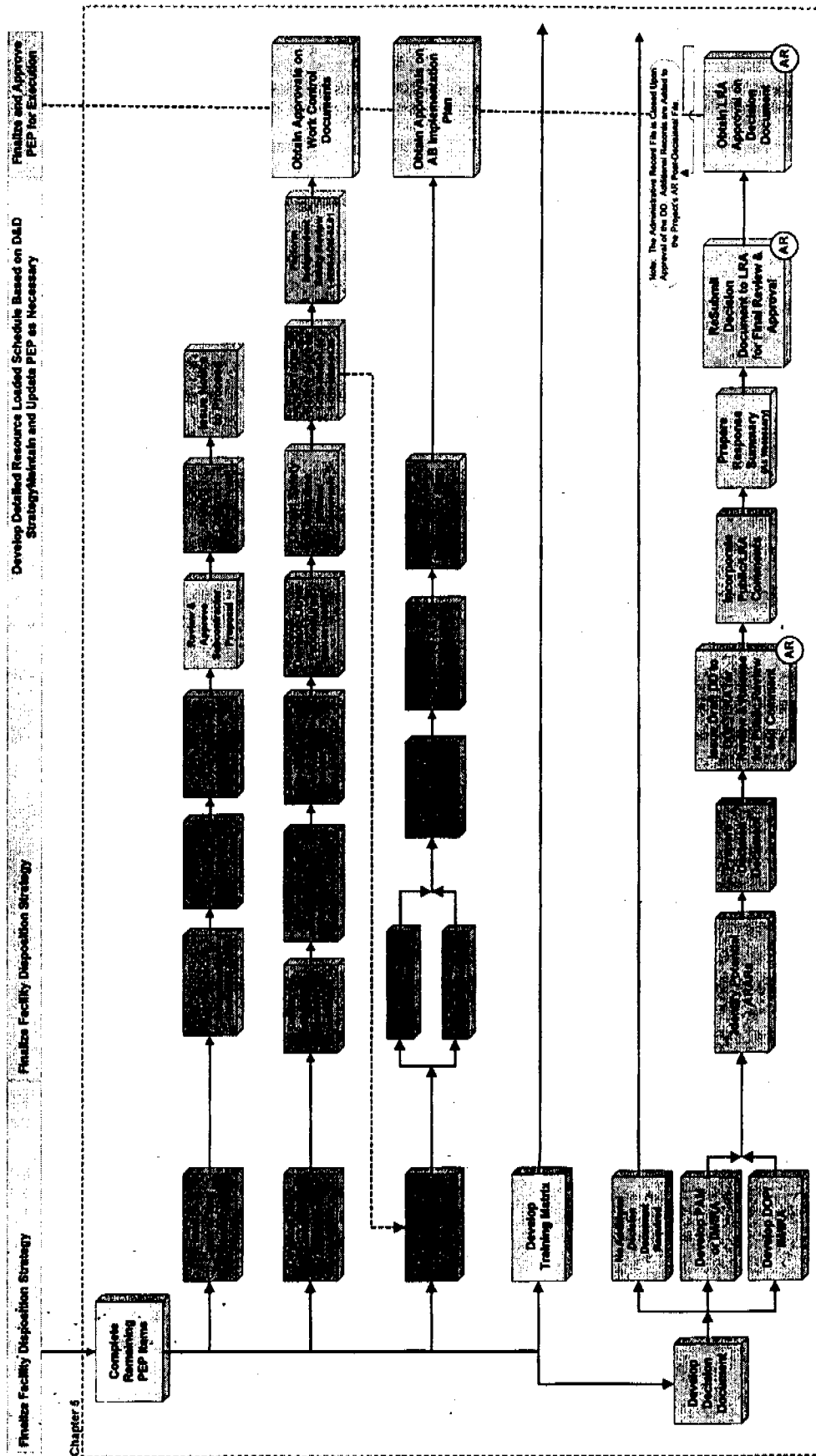
The Phase II Planning and Engineering activities are shown in the process logic flow diagram in Figure 5-1. The Phase I Planning activities have been completed prior to this phase of the facility disposition process. The key interface points are the results from the RLC and the confirmation of the facility type used as a basis for developing the RFCA Decision Document. The continued development of the PEP is shown as a long-bar at the top of the process flow diagram and encompasses the entire project life. In this phase the PEP is finalized and approved providing the final engineering design and scope and the basis for work execution. The other key activities involve developing the work control and authorization basis documents. The process flow diagram shows that the results from the Phase II Planning and Engineering activities come together to provide the basis for the implementing the work control documents and performing the final preparations prior to work execution.

09/24/99

SECTION 5 - PHASE II PLANNING AND ENGINEERING

MAN-076-FDPM
REV 1
PAGE 61 OF 222

Figure 5-1
PHASE II PLANNING AND ENGINEERING
PROCESS FLOW DIAGRAM



5.3 REQUIREMENTS

5.3.1 Finalize and Approve PEP

The facility disposition PEP was initiated (or updated if already started in deactivation phase) in the Project Initiation and Scoping Section and then updated in the Phase I Planning Section. At this point in the facility disposition process, it is time to reach closure on the first complete PEP for the project. Specific information to be provided in this final PEP is listed and discussed in Section 2 and Appendix C-1. The following sections provide additional requirements and guidance for finalizing the PEP.

5.3.1.1 Complete Remaining PEP Items

The remaining items necessary to finalize the PEP are completed using the PEP template and guidance in Appendix C-1 to determine what may be needed. The Health and Safety Plan and Waste Management Plan are examples of documents or sections to be included in the final PEP. The quality strategy needs to be completed and incorporated in Section 14.2 of the PEP. This assessment will outline the criterion requirements that apply to the project using the graded approach. The project level documentation should include an assessment of the subcontractor quality program and how it will comply with the Site QAP. These plans *may* be separate documents attached to the PEP or separate sections within the PEP. In addition, the following items identified in Section 2 and Appendix C-1 are completed in this phase of the project:

- Contracting strategy,
- Training matrix,
- Resource loaded schedule,
- Work control documents,
- Authorization basis documents, and
- RFCA Decision Documents.

5.3.2 Finalize Contracting Strategy

The preliminary contracting strategy for the facility disposition project was discussed during the scoping meeting. During the Phase I Planning efforts, the contracting strategy was revised and updated based on the Phase I activities. During the Phase II Planning efforts, the contracting and procurement strategy is finalized in preparation for executing the necessary procurement contracts and starting the work execution activities. The final contracting strategy **SHALL** be determined by the Project Team and documented in the PEP. The contracting strategy can include developing the engineering studies or work packages, work control documents, the authorization basis documents, or the RFCA Decision Documents. Therefore, some of the activities in Phase II Planning and Engineering *may* be performed by a subcontractor organization and others performed by the project team. In addition, subcontractor personnel could fill some of the project team positions. The following actions are followed in accordance with the site infrastructure:

- Performing Davis-Bacon determination,
- Preparing request for proposal,
- Preparing government bid estimate,
- Reviewing and approving subcontractor proposals,
- Awarding the subcontractor contract: and,
- Issuing the notice to proceed.

61

A template for developing the Statement of Work (SOW) is provided in Appendix D-1 to assist the project team in preparing the request for proposal. An application for pre-qualification of prospective bidders *may* be required if a subcontractor pool does not already exist. A template for this application is shown in Appendix D-2. A process description for administration of the pre-qualification pool is contained in Appendix D-3.

5.3.3 Work Control Document (WCD) Development

The IWCP Manual applies to all Site employees and subcontractors performing or supporting onsite work. All maintenance, modification, decommissioning, demolition, environmental remediation, operations, surveillance, and construction work at the Site is performed in accordance with the IWCP Manual. For the purposes of this manual, "work" will be interpreted as any of the above types of activities.

The IWCP Manual provides a method by which ISM is implemented on the job. It provides a single process through which all work on the Site is performed. It ensures that the work is screened consistently to uniform criteria and that hazards are appropriately analyzed and controlled. Based on the facility disposition scope defined and documented in the PEP, and the work planning previously completed in this chapter, work control documents are prepared in accordance with the IWCP Manual.

During Phase II Planning and Engineering, the facility disposition work scope is finalized and documented in the PEP, where it is divided into specific work elements. Each of the major work elements requires that one or more work control documents be developed to perform the work. Development of work control documents is an iterative process and includes review and assessment of the work products (e.g., SME concurrence, management reviews, independent safety review, and quality assurance evaluations). Feedback from previous work is used in the development of the work control documents.

5.3.3.1 Determine Types of Work Control Documents Needed

Based on the facility disposition scope, which is divided into major work elements in the PEP, the Principal Subcontractor PM with support from the project team determines the appropriate type and number of work control documents required for each major work element. Guidance is provided in the IWCP Manual to assist the project manager in making these decisions. In addition, descriptions of the different types of work control documents are contained in the IWCP Manual.

5.3.3.2 Form Work Planning Teams and Complete Work Control Documents

Based on the results of the ASF that determined the level of work planning required for the project, work planning teams are formed for each major work element of the facility disposition scope defined in the PEP. These work planning teams may have initiated the work elements required in the IWCP Manual during Phase I and II Planning and are now ready to develop the work control documents that incorporate the results of the planning efforts. The Principal Subcontractor PM directs the work planning teams to complete specific work control documents to support the major work elements of the project in the framework of an integrated hazard assessment. The methodology for conducting an integrated hazard assessment is discussed in the IWCP Manual. If required, the PM may form new work planning teams to develop the work control documents, or use some or all of the existing teams. Each type of work control document is developed, documented, and approved in accordance with the specific guidance and requirements in the IWCP Manual.

62

5.3.4 Authorization Basis Document Development

Facility disposition projects usually involve activities that are not included in the facility AB document currently in place for the operations or deactivation phase of the facility. Therefore, as a minimum the facility disposition activities need to be reviewed to verify that they are included in the current facility AB document. In most cases, the change in mission or scope for the specific decontamination and decommissioning activities involved in a facility disposition project will require a revision or update to the facility AB document. This change to the facility AB is completed and implemented prior to the readiness determination, work preparation, and work execution phase of the facility disposition project.

For facilities that are classified as a Hazard Category 2 or 3 Nuclear Facility, the AB document is reviewed and approved by DOE and takes the form of a FSAR, BJO, or Basis for Operation (BFO). Note: There are no Hazard Category 1 nuclear facilities at RFETS. A revision to the current AB document is usually required for nuclear facilities due to the change in mission and scope of the facility from operations to closure. A safety evaluation is performed (SES/USQD) to determine the need for a revision or update to the facility AB. This revision can take the form of a new AB document, a page change, or preferably, can be completed during the annual update to the existing AB document. Significant changes to AB documents usually require an implementation plan to implement the revised facility control set.

For non-nuclear facilities (e.g., radiological or industrial facilities, less than Hazard Category 3) which are being planned for facility disposition, the AB is provided by the Site Safety Analysis Report (Site SAR). However, some projects may require that an Auditable Safety Analysis (ASA) is completed and constitute the contractor-approved authorization basis (non-capitalized) document for the facility disposition project. Facility Safety Analyses (FSAs) or other equivalent safety analyses can be performed as long as they meet the requirements and intent of ASAs.

The following requirements for the development of authorization basis documents related to facility disposition projects are divided into non-nuclear and nuclear facilities.

5.3.4.1 NON-NUCLEAR FACILITIES

This section applies to facilities that are classified as less than Hazard Category 3 (e.g., "radiological" or "industrial" facilities) as defined in DOE Standard, DOE-EM-STD-5502-94, *Hazard Baseline Documentation*, August 1994.

If an authorization basis or safety analysis currently exists for the facility, the scope of the facility disposition project is compared to the scope analyzed in the safety analysis documentation. The changes in scope are identified and documented for further analysis. If no changes in the facility scope are required to accommodate the facility disposition project, document this review and continue with the facility disposition process in this chapter. If there is no authorization basis or safety analysis documentation for the scope of the facility disposition project, perform a safety analysis of the new scope in accordance with Step C below.

A safety analysis of the new or revised scope of work for the facility disposition project is performed and documented as an ASA (FSA or equivalent safety analysis) in accordance with the IWCP Manual. Additional guidance from the following documents is used to perform the ASA: DOE Standard, DOE-EM-STD-5502-94, *Hazard Baseline Documentation*, August 1994; and Kaiser-Hill Nuclear Safety Technical Report (NSTR), *Safety Analysis and Risk Assessment Handbook (SARAH)*, NSTR RFP-5098, Revision 1, April 22, 1997. The safety analysis

63

documented above may be kept as a separate document, or included with the HASP for the project or facility. In addition, the hazard information collected and documented as part of the RLCR (See Section 4) can be used as input to the safety analysis for the authorization basis document. ASAs **Should** include, as a minimum, the following subsections:

- Facility/project activities analyzed
- Hazards identified
- Qualitative/quantitative analyses performed
- Controls required to prevent /mitigate hazards (administrative and engineered controls, including system functional requirements)

The completed safety analysis documentation (serving as the non-nuclear authorization basis documentation) **SHALL** be reviewed and approved by the K-H PM, the applicable Program Chief Engineer (PCE), and the Facility Manager. This approved documentation can be submitted to DOE and other regulatory agencies, for information only, at the discretion of the K-H PM.

Based on the completed safety analysis, any new or revised administrative or engineered controls are implemented in the facility by the Facility Manager. At the discretion of the Facility Manager, a formal Implementation Plan can be used to implement the new or revised controls depending on the extent and magnitude of the changes. Successful implementation of the changes in the facility authorization basis controls are verified in accordance with the Readiness Determination Manual.

5.3.4.2 Nuclear Facilities

As required by the Nuclear Safety Manual and DOE Order 5480.23, *Nuclear Safety Analysis Reports*, this section applies to facilities that are classified as Hazard Category 2 or 3 "nuclear" facilities. This classification is defined in the following DOE Standards: DOE-EM-STD-5502-94, *Hazard Baseline Documentation*, August 1994; DOE-STD-1027-92, *Hazard Categorization and Accident Analysis Techniques for Compliance with DOE Orders 5480.23*, Nuclear Safety Analysis Reports, December 1992.

The change in scope or mission of the facility based on the proposed work being performed as part of the facility disposition project is reviewed in accordance with the Nuclear Safety Manual and the applicable safety evaluation process (SES/USQD) implemented for the facility. If the safety evaluation indicates that the new or revised activities can be performed within the current facility authorization basis document, then this review is documented and filed with the work control documents. If a change to the facility authorization basis document is required based on the safety evaluation, proceed to the next step to make the change.

There are several options for changing the document. The simplest is to make the change during the next annual update. Another option is to make a page change to the document that requires DOE approval. The most complicated change is to perform a major revision or to completely develop a new authorization basis document. All of these changes to the facility authorization basis document are performed in accordance with the Nuclear Safety Manual and the applicable implementing procedures for the facility. This includes performing a safety analysis (if required); determining necessary additional or revised engineered or administrative controls; developing changed pages, a revised document, or a new document; and going through the review and approval process (internally and DOE). Some information from the safety analysis and control set determination can be useful to the work planning teams developing the work control documents and to the project team developing the HASP for the project or facility.

64

Based on the revised or new authorization basis document, any new or revised administrative or engineered controls that are required to be implemented in the facility in order to perform the facility disposition project are implemented by the Facility Manager in accordance with the Nuclear Safety Manual. At the discretion of the Facility Manager, a formal Implementation Plan can be used to implement the new or revised controls depending on the extent and magnitude of the changes. Successful implementation of the changes in the facility authorization basis controls are verified in accordance with the Readiness Determination Manual.

5.3.5 RFCA Decision Document Development

This section presents the requirements for the development of a RFCA Decision Document for each of the three facility types. The guidance for determining if a RFCA Decision Document is required is contained in Section 1.1.4 of the DPP. If a RFCA Decision Document is required for the project, the specific requirements and guidance for developing the RFCA Decision Document by facility type is discussed below. Appendix D-4 presents a template for development of the RFCA Decision Documents that is applied using a graded approach for a PAM, IM/IRA, or DOP.

5.3.5.1 RFCA Standard Operating Protocol

An RSOP is an approved protocol that applies to a routine decommissioning and environmental restoration activity regulated under RFCA. An RSOP can be used in lieu of preparing a project-specific decision document for repetitive, routine activities. An RSOP must be approved only once, although it may be used on several projects. However, DOE must notify the LRA that the RSOP will be used on a specific project. Since decommissioning activities are often similar in nature, RSOPs are an effective way to document work processes while minimizing paperwork at the project level. The project team should determine if any approved RSOP applies to any of the project activities. If an approved RSOP does exist, the project **SHALL** write a letter to DOE specifying where and how the RSOP will be implemented.

5.3.5.2 Type 1 Facility RFCA Decision Documents

Decommissioning of facilities classified as Type 1 (uncontaminated) based on a RLCR do not require any additional RFCA Decision Documents and can proceed based on plant procedures and infrastructure. However, a scoping meeting and notification letter is required. If contamination is discovered during decommissioning of a facility classified as Type 1, decommissioning activities in the affected areas **SHALL** cease until the LRA is notified and the potential need to reclassify the facility is collaboratively considered.

Discovery of contamination after the determination that the facility is Type 1 *may* not necessarily result in the need to reclassify a facility into the Type 2 classification. If contamination can be removed by methods in which there is no threat of release of a hazardous substance to the environment; for example by simply cutting out the fixed contamination, the facility *may* remain as Type 1. Contamination **SHALL** be cleaned up and properly disposed using existing radiological and hazardous waste management procedures.

Reclassification as a Type 2 facility **SHALL** be considered in any instance where removal techniques involve a threat of release of a hazardous substance environment (as determined by the consultative process with DOE and the LRA).

65

No further regulatory involvement for Type 1 facilities is required for facilities containing asbestos, provided the project team follows the requirements of the Site asbestos management program.

For Type 1 facilities containing PCBs that are not contaminated with radioactive materials, no further regulatory involvement is required, provided the project team follows the requirements of the Site PCB management procedures. In this case, no further RFCA Decision Documents are required and the waste is managed in accordance with regulatory and procedural documents.

5.3.5.3 PAMs and IM/IRAs

PAMs are applied when the project execution can be completed within 6 months and IM/IRAs are applied when the execution time is 6 or more months. The process for approval of PAMs and IM/IRAs, and the required contents for each, are presented in RFCA paragraphs 106 and 107, respectively. The template, table of contents, and document preparation guidance for developing a RFCA Decision Document are provided in Appendix D-3. Using a graded approach, this template is tailored for a PAM or IM/IRA as discussed with the LRA in the joint scoping meeting.

The PAM or IM/IRA **SHALL** be submitted to DOE for review and approval. After comment resolution and DOE approval, DOE may submit the PAM to the LRA and release it for public comment. DOE submits the draft IM/IRA to the LRA fourteen days before releasing it for public comment. DOE and the LRA will agree in advance to the length of the public comment period. Following resolution of the public comments, a responsiveness summary is prepared and the PAM or IM/IRA is revised, if necessary, and approved by the LRA. The draft RFCA Decision Documents, responses to official regulatory comments, formal responsiveness summaries, and the final PAM or IM/IRA is placed in the project-specific administrative record file.

5.3.5.4 DOPs

The DOP is prepared and approved in accordance with the RFCA IM/IRA approval process. The DOP contains sufficient information so the regulators can be satisfied that the project can proceed compliantly, with a high probability of success. Support facilities associated with a major project may be included in the DOP if they can be managed in the same project. The template, table of contents, and document preparation guidance for RFCA Decision Documents (including DOPs) are provided in Appendix D-4. Using a graded approach, this template is tailored for a DOP.

The project team **SHALL** prepare the DOP and submit it to DOE for review and approval. After comment resolution and DOE approval, DOE submits the draft document to the LRA fourteen days before releasing it for public comment in accordance with the RFCA IM/IRA approval process. DOE and the LRA will agree in advance to the length of the public comment period (either 45 or 60 days). Following resolution of the public comments, a responsiveness summary is prepared and the DOP is revised, if necessary, and approved by the LRA. The draft RFCA Decision Document, responses to formal regulatory comments, formal responsiveness summaries, and the DOP is placed in the project-specific AR file.

66

PHASE II PLANNING CHECKLIST			
Project:	Project Manager:		
Activity	Exemption from D&D Division Manager	Date Completed	Signature
1. Finalize contracting strategy and document in PEP. (FDPM, 5.3.2)			
2. Finalize, complete required review as specified in Appendix A-3 of the FDPM, and obtain approval of PEP. (FDPM, 5.3.1)			
3. Develop Statement of Work in accordance with Appendix D-1 of the FDPM. (FDPM, 5.3.2)			
4. Complete application for pre-qualification of prospective bidders, if necessary, in accordance with Appendix D-2 of the FDPM. (FDPM, 5.3.2)			
5. Determine types of work control documentation required. (FDPM, 5.3.3.1)			
6. Form work planning team and complete work control documents. (FDPM, 5.3.3.2)			
• Attach a list of the work control documents developed			
7. Develop authorization basis document and complete required review as specified in Appendix A-3 of the FDPM. (FDPM, 5.3.4)			
8. Develop RFCA decision document and /or prepare notification letters to utilize existing RSOPs. (FDPM, 5.3.5)			
• Attach a list of decision documents that will be used for the project			

Checklist Complete:

Kaiser-Hill Project Manager (print/sign)

Date

Approval to proceed to Project Close-out:

Kaiser-Hill D&D Division Manager (print/sign)

Date

67

6.0 PROJECT EXECUTION

The purpose of this chapter is to present the requirements and guidance for performing activities in the project execution phase of the project, following completion of the Phase II Planning and Engineering. The objective of this phase is to complete the work preparations and then execute all planned work.

6.1 OVERVIEW

The activities performed in this chapter include executing the procurement contracts finalized in Section 5, demonstrating a readiness to proceed, and executing the actual physical work activities within the major headings of site preparation, dismantlement, demolition, and transition to environmental restoration. The decision document and PEP finalized in Section 5 contain the methods and schedule of performance for the work.

Site preparation activities include mobilization, isolation of building services, installation or removal of services as needed for the project. Dismantlement includes removal of process equipment and the equipment and services that directly support it. In-process characterization is performed during dismantlement with the resulting documentation being formatted to support the Pre-Demolition Survey. building surface decontamination is the preparation and documentation for demolition. The surveys generated during building surface decontamination are compiled with the appropriate in-process characterization data to form the Pre-Demolition Survey. Demolition includes the physical work to bring the facility including the slab (defined as the footprint or pad that is left following demolition).

The final step in project execution prior to close out is the transition to environmental restoration. This includes surveying and documenting the slab(s) and verifying that any under slab contamination is acceptable to leave for future environmental restoration. The Site's ER organization participates in the review of the results of the sampling. This will determine if immediate action is necessary. It is intended that the transition of physical work between decommissioning and ER will be seamless, with ER involvement increasing as the transition approaches and decommissioning involvement decreasing after.

During project execution, the PEP and its applicable supporting plans are updated periodically with the changing information found during the in-process characterization and above listed activities. Waste is managed in accordance with the project's WMP contained in the PEP. As new information is obtained that significantly impacts the categorical generation rates, the Site's WM Organization is notified of this impact.

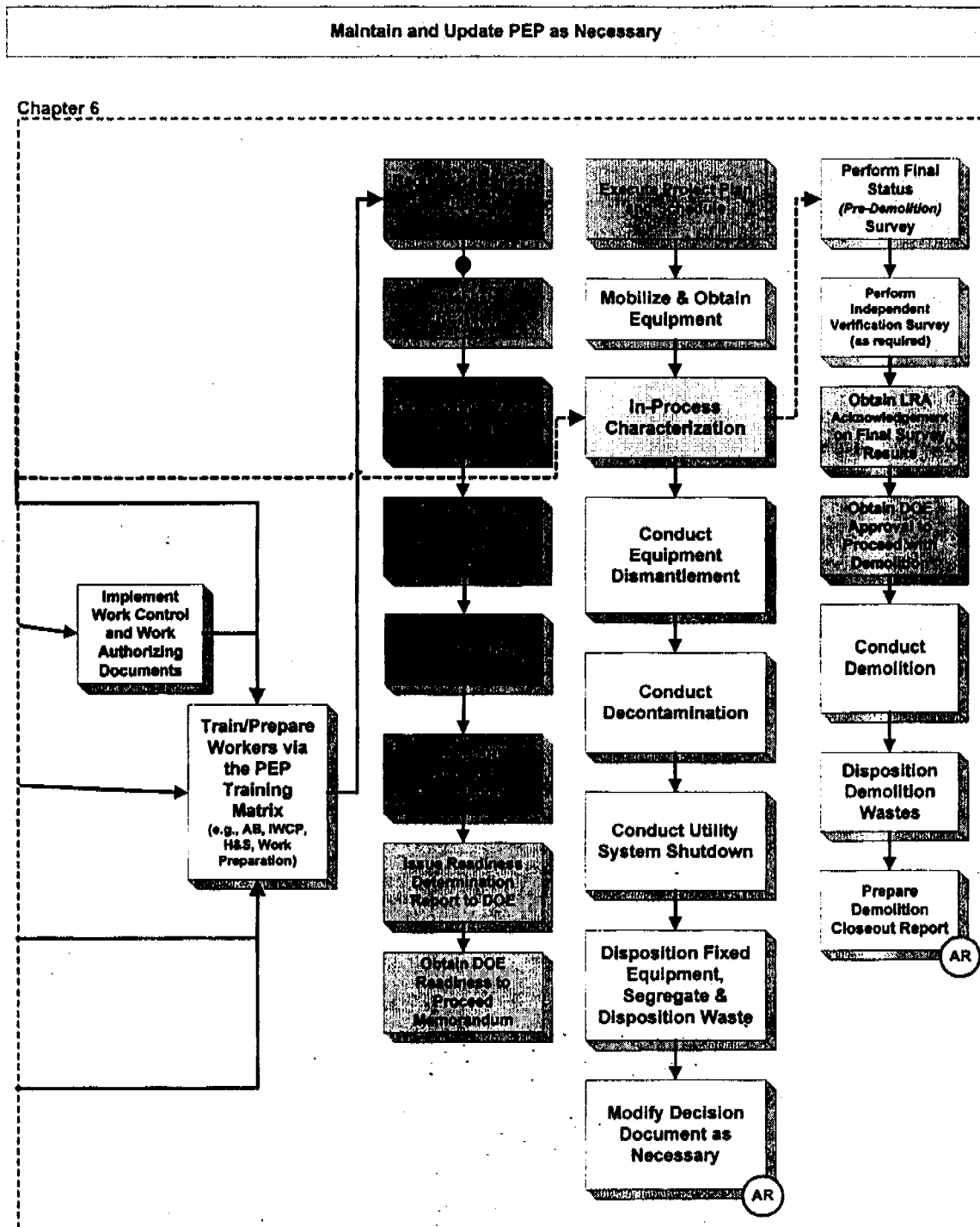
Once the Execution Phase is initiated, the PM **SHALL** use the Execution checklist to track the completion of the requirements outlined in this section. The Execution checklist **SHALL** be completed and signed by the PM and the D&D Division Manager prior to initiating Close-out. The Execution Phase checklist is located at the end of this Section.

6.2 PROCESS LOGIC FLOW

The activities involved in the project execution phase are shown in the process logic flow diagram in Figure 6-1.

68

Figure 6-1
PROJECT EXECUTION
PROCESS FLOW DIAGRAM



6.3 REQUIREMENTS

For Type 1 facilities, many of the steps and requirements described below are eliminated. For all facility types, the DPP is a RFCA Decision Document that is used in the preparation of any additional facility specific Decision Documents, if required. In accordance with the DPP, decommissioning of buildings classified as Type 1 (uncontaminated) based on a RLCR will not require additional RFCA Decision Documents (other than the DPP) and will proceed based on plant procedures. However, if contamination is discovered during decommissioning of Type 1 facilities, decommissioning activities **SHALL** cease in the affected areas, until the LRA is notified and the potential need to reclassify the facility is considered collaboratively.

Reclassification from a Type 1 to a Type 2 facility **SHALL** be considered in any instance where removal techniques may involve a threat of release of a hazardous substance (as determined by the consultative process) to the environment.

Decommissioning of Type 1 facilities is therefore, simplified to a commercial-type facility removal project. Decontamination is not required, and no pre- or post- demolition survey report is required. The RLCR with LRA concurrence regarding the facility type (if provided per section 3.4.4 of the DPP) and the project close-out report **SHALL** be included in the AR as a project-specific AR file. These documents are available to support the final Corrective Action Decision/Record of Decision (CAD/ROD) for the appropriate OU.

Project execution utilizes the documentation generated in accordance with the previous chapters of this manual. Governing Site requirements **SHALL** also be followed during the execution of the project. For example, the subcontractors **SHALL** perform the work in accordance with the Conduct of Operations Manual, MAN-066-COOP. That is, follow the established procedures, conduct the required pre-evolution briefings, utilize a work force trained and qualified for the job, and conduct plan-of-the-day meetings.

Maintaining a safe working environment and a safety awareness culture is paramount to the success of the project and the K-H Team. The performance subcontractor **SHALL** have, and comply with, a HASP approved by the K-H team. The RFETS Health and Safety Practices Manual provides additional requirements for Site specific working conditions with which each subcontractor **SHALL** comply.

Job specific radiological safety is enhanced by the use of the RFETS Radiological Control Manual. Subcontractors **SHALL** execute the work in accordance with this manual. As part of this process the performing subcontractor **SHALL** submit the project work instructions, with the potential of encountering levels of radiological contamination above background, to the appropriate Radiological Control Organization so that a Radiological Work Permit, tailored to the projected working conditions, *may* be generated. The subcontractor **SHALL** follow the established RWPs.

Maintaining a safety awareness culture is enhanced through the use of the principles of the ISMS. These principles are implemented through the IWCP, reference Section 5. All work plans **SHALL** be reviewed with the employees performing the work. Comments from the employees on these plans **SHALL** be considered. After the work plans are finalized, the work steps **SHALL** be reviewed with employees (this **Should** occur not later than the pre-evolution briefing).

6.3.1 K-H READINESS DETERMINATION

The project team performs a Readiness Determination in accordance with the Readiness Determination Manual to ensure that the project is ready to be performed or executed. To ensure that the Readiness Determination is adequately funded, the subcontractor PM **SHALL** prepare project technical description sheets (the format is provided in the Readiness Determination Manual), with a recommended level of Readiness Demonstration and approval authority, and submit them to the K-H PM. The K-H PM **SHALL** agree to the level of Readiness Demonstration that is adequate for the project, and **SHALL** ensure that the package is submitted to DOE for review. DOE reviews the package and forwards the decision back to K-H.

After all decommissioning project regulatory and operational documentation is approved and the performing subcontractor has trained its personnel to the appropriate level of qualification, the performing subcontractor PM **SHALL** ensure that the objectives for operational readiness, as listed below, are satisfied. When these objectives are satisfied, the PM **SHALL** prepare the Readiness Certification Memorandum and forward it to the subcontractor President for approval.

6.3.1.1 Conduct Personnel Training

All training conducted for the project execution **SHALL** be in accordance with the Training Users Manual 96-RF/T&Q-0005. If the K-H team determines that a RCRA unit will be managed in full compliance with RCRA, i.e., the substantive and administrative requirements, then the unit owner, unit custodian, and inspectors **SHALL** be trained in accordance with the RCRA Part B Permit.

In addition, if K-H Team bargaining unit employees are performing physical work, then these workers **SHALL**, at a minimum, be trained the courses defined for the D&D Worker classification. If the hands-on work is **NOT** being performed by K-H Team Bargaining Unit employees, then these workers **SHALL**, at a minimum, be trained with the courses of equivalent content to that of the D&D Worker classification, as approved by a K-H Team Training Coordinator. The core training requirements for D&D Workers are presented in Appendix E-1.

6.3.1.2 Conduct Graded Project Readiness Determination

Kaiser-Hill conducts a graded approach Readiness Determination in accordance with the Readiness Determination Manual, 1-MAN-040-RDM. The following summarizes the objectives of the Readiness Determination:

- The activities can be conducted within the approved safety and authorization basis,
- The systems, structures, and components that are important to safety are identified and are in a condition to assure an acceptable level of safety,
- Operational or work procedures are identified and are adequate to control the processes and assure an acceptable level of safety,
- Personnel have adequate levels of knowledge, qualifications, and experience such that satisfactory formality of operations will be assured, and
- Necessary support infrastructure is adequate to conduct the activity safely
- All environmental concerns from the ESS organization have been addressed.

When the project is ready to be subjected to the Readiness Determination, the principal subcontractor President **SHALL** issue a Readiness Certification Memorandum, accompanied by an Implementation Plan that certifies that the activity is ready to commence operations with the

71

existing personnel, equipment, and procedures. This Memorandum **SHALL** be forwarded to the K-H Operational Organization Vice President.

The K-H Operational Organization Vice President **SHALL** endorse the Readiness Certification Memorandum and forward it to DOE Deputy Manager of Technical Programs and the K-H Independent Safety Oversight Division Manager.

The Environmental Compliance Division of DOE conducts a graded ERE, as appropriate. DOE prepares, reviews, and approves a letter to K-H stating the disposition. Decommissioning operations are authorized after any conditions to be corrected are completed.

The extent and complexity of the Readiness Determination can be obtained by following the Guidance Tree in Appendix 4 of the Readiness Determination Manual, 1-MAN-04-RDM. It may be as simple as a Management Review by the K-H Team, or as complex as a Readiness Review up to and including Operational Readiness Review by K-H and the DOE.

6.3.1.3 Preparation For Physical Work

To demonstrate readiness, the subcontractor will have already mobilized forces. Due to the comprehensiveness of most Readiness Determinations, the duration for the activity will likely be greater than several working days. This time may be used by the subcontractor to refine the detailed project schedule, develop the daily planning sheets, and brief personnel on all project and other required documentation, especially the work control procedures developed to complete the project. In the spirit of ISM, familiarizing personnel with floor plans, work sets, area specific hazards and mitigating factors, performing walk-throughs of the project schedule, as it relates to the different work sets, updating briefings on radiological and hazardous waste control requirements, as well as authorization basis document requirements, may also be helpful. In addition, equipment could be staged, offices and break areas established, and plan-of-the day forms and meetings formulated.

6.3.2 COMMENCEMENT OF EXECUTION ACTIVITIES

After demonstrating the readiness to proceed, the project is ready to initiate physical decommissioning activities, in accordance with the PEP (and other project documentation). The commencement of project execution activities normally begins with the isolation of Building Services including activities such as disconnecting the facility from as many plant services as possible prior to dismantlement, such as:

- Fire suppression water lines
- Electrical power lines
- Natural gas lines
- Process waste lines
- Steam supply and condensate return lines
- Telephone lines
- Local Area Network lines
- Water and sewer lines

Note: The bullet lists provided in this section are not intended to be all-inclusive, but rather examples of the types of activities that may be required to be performed

The following activities related to installation and/or removal of services, systems, facilities, or hazards can also occur prior to or during physical dismantlement of the building:

- Temporary installation of services needed to support project operations that in some cases are temporary alternatives to services to be taken out for project efficiencies. For example, installation of power to offices and work areas to support lighting and decommissioning equipment that *may* be disconnected at the main switch gear, to avoid multiple costly Lock Out/Tag Outs.
- Removal of all exposed electrical distribution cables, conduit, panels, fixtures, devices, and trays that can be removed prior to dismantlement operations.
- Removal of all non-load bearing partitions and walls and false ceilings constructed of wood, transite, and wallboard in accordance with the facility authorization basis (non-credited fire barriers).
- Removal of HVAC ducts not important to safety, outlets, and hangers that can be removed prior to dismantlement operations.
- Removal of all fire protection systems that can be removed prior to dismantlement operations.
- Removal of all windows, glass and frames constructed of combustible material that can be removed prior to dismantlement operations.
- Removal of all combustible material and loose metal in the area.
- Removal of asbestos, asbestos waste, or asbestos abatement, which **SHALL** be:
 - Performed by a licensed asbestos abatement contractor,
 - In compliance with Colorado Air Quality Control Commission Regulation 8, *Control of Hazardous Air Pollutants* (SCCR-1001-10), and
 - Packaged and disposed of in accordance with Site (refer to Waste Management Section below) and State regulations.

Note: This does not describe Type 3 Facilities, include mobilization or site prep, deactivation turnover/interface

6.3.3 DISMANTLEMENT

Deactivation and/or major hazard reduction occurs ahead of dismantlement. A partial list includes activities such as: removal of excess chemicals, tooling, empty cabinets, office furniture, miscellaneous tooling, excess equipment, the draining and dispositioning of liquid wastes, stabilization of contamination where appropriate, disposition of records, and wiping of gloveboxes.

Deactivation and major hazard reduction are activities that remove all the loose equipment and other contents from process equipment, leaving a shell of process equipment in preparation for dispositioning in dismantlement. Dismantlement removes all the process equipment and performs in-process characterization within the facilities in preparation for decontamination of the areas within the facility shell. Building surface decontamination and documentation of surveys for the Pre-Demolition Survey prepares the facility shell for demolition.

Dismantlement includes removing process equipment, closing remaining RCRA units, removing all remaining distributed systems (utilities), performing in-process characterization, and decontaminating all facility surfaces that are above the release criteria. These activities **SHALL** be performed in accordance with the decision document, PEP, and work control procedures.

6.3.3.1 In-Process Characterization

In-process characterization is performed to evaluate on-going decommissioning activities in preparation for facility disposition. This characterization is performed to assure that adequate data is obtained for waste management, transportation, and building surface decontamination (for facility dispositioning) purposes. This characterization also aids in identifying new hazards uncovered during the dismantlement strip out operations that were not identified in the RLCR. If this occurs, cease operations in the affected areas, contact DOE, and initiate the consultative process. Although a formal report is not required for this phase of characterization, the DQOs and decision rules for radionuclides, asbestos, hazardous and toxic materials, and other constituents of concern, contained in Appendix B, of the DDCP, **SHALL** be followed.

The decontamination work will be closely related with the operations support of characterization and pre-demolition survey reports. This work carries the highest cost and schedule risk since the exact amount of work required cannot be determined until the survey work is finished. This work may involve packaging of building materials, characterization, removal of surface coatings, scabbling of concrete surfaces, and decontamination of building surfaces.

6.3.3.2 Pre-Demolition Final Survey Report

The data obtained from sampling and surveys during Dismantlement **SHALL** be retained, tabulated, and summarized in the Pre-Demolition Survey Report. An annotated outline of the Pre-Demolition Survey Report is presented in the Site-wide Pre-Demolition Survey Plan. The Pre-Demolition Survey Report is a RFCA-mandated report. This report **SHALL** provide data on the nature and extent of radiological and chemical contamination after dismantlement (including decontamination).

In accordance with the DPP and RFCA Decision Document, at the conclusion of dismantlement and preparation of the Pre-Demolition Survey Report, Site personnel will confirm their activities have achieved the criteria for the completion of building disposition for buildings that are demolished. After approval from the LRA, facility demolition *may* occur.

On an as needed basis, DOE may elect to verify that the results from the Pre-Demolition Survey meet acceptable criteria. Independent review of documentation, survey, and sampling data may be conducted to confirm that requirements identified in the characterization plans were implemented and that characterization was performed within control requirements and tolerances.

6.3.4 DEMOLITION

After completing dismantlement and decontamination, the last steps prior to demolition include: completion of the Pre-Demolition Survey Report, preparation of the Demolition Plan, and completing the demolition notification to CDPHE.

Demolition consists of removing the remainder of the physical structures, monitoring for releases during demolition, if required, and dispositioning the resulting waste streams. Specific demolition activities include:

- Removal and disposition of roof top equipment.
- Removal of roofing material down to the primary roof barrier (concrete slab or steel sheet.
- Removal of equipment attached to the building walls or adjacent to the building.

74

- Removal of structures
- Rubblizing of the walls and loading and transport to a sanitary landfill or stockpiled for recycling.
- Some separation of structural steel from the concrete rubble, but only as necessary to facilitate loading, hauling, and/or stockpiling.

The Principal Subcontractor PM **SHALL** prepare and submit a Demolition Closure Report to the K-H D&D Division Manager to be forwarded to DOE and on to the LRA. The Demolition Closure Report **SHALL** be placed in the project-specific AR.

6.3.5 TRANSITION TO ENVIRONMENTAL RESTORATION

Prior to the initiation of decommissioning activities, monitoring efforts (monitoring for surface water, groundwater, and air) are required to establish the baseline conditions that exist in the Industrial Area. This effort is coordinated with the K-H WRO (ER projects) and ESS organizations. To establish good baseline conditions, this effort **Should** occur very early in the decommissioning scoping phase and **SHALL** be incorporated into the IMP update.

The K-H WRO (Restoration Projects) and ESS organizations **SHALL** be integrated into decommissioning project scoping to develop an understanding of the project, such as type of contaminants expected in the building in order to decide whether adequate monitoring is in place to establish the baseline conditions; to decide what part of the structure will be left at the end of decommissioning; and to define the anticipated role of the ER projects at the end of decommissioning. Following decommissioning, areas beneath and adjacent to the building will be dispositioned either by remediation or preparation of a no-further-action justification document.

6.3.6 CONSTRUCTION MANAGEMENT DURING EXECUTION

During project execution the following construction related reports **SHALL** be required, if the facility disposition project involves any construction or deconstruction activities.

REQUIRED CONSTRUCTION REPORTS

Construction Work In Progress Report

A Construction Work in Progress (CWIP) Report listing all active facility disposition and construction projects **SHALL** be prepared monthly and provided to K-H Accounting. The CWIP Report provides tracking information on planned and actual construction and project completion dates.

Procurement Report

A Procurement Report **SHALL** be prepared for active facility disposition and construction projects providing a listing of all planned, in-progress, and completed procurement activities. This report identifies pending procurement activities and includes data to track those activities to completion. This report is used by Procurement to plan and track workload. This report is also used by the Construction Management Group within the D&D Projects Division to plan and oversee the administration of construction contracts and subtasks and, plan project craft and support personnel requirements.

75

REQUIRED CONSTRUCTION REPORTS

Daily Construction Reports

During active construction, starting with the Notice to Proceed and ending with the Final Project Close-out, a daily construction report **SHALL** be prepared and distributed. The general form and content of this report is shown in Appendix C-3. The daily construction report **SHALL** be prepared by the construction manager and delivered to project team members at the close of each business day.

Monthly Personnel Resource Usage Report

The construction manager **SHALL** prepare a monthly manpower report as shown in Appendix C-4. This report will be provided to the D&D Project Office by the fifth working day of the Month. Construction tasks being performed by a subcontractor are not included in this report.

Construction Progress Photos

During active construction the PM **SHALL** document job progress by photographing significant changes in job. On minor projects, photos **SHALL** be taken at least once during a job. On significant projects, photos **SHALL** be taken at start of each project and at least weekly thereafter. The copies of the photos **SHALL** be printed with one copy going into the project file and two copies being provided to the D&D Project Office. All photos **SHALL** be captioned as shown in Appendix C-5.

PROJECT EXECUTION CHECKLIST			
Project:	Project Manager:		
Activity	Exemption from D&D Division Manager	Date Completed	Signature
1. Review technical description sheets prepared by subcontractor, agree to level of readiness and submit to DOE for review. (FDPM, 6.3.1)			
2. Ensure personnel training is complete for K-H and subcontractors. (FDPM, 6.3.1.1)			
3. Conduct graded project readiness determination in accordance with the Readiness Determination Manual, 1-MAN-040-RDM. (FDPM, 6.3.1.2)			
4. Review subcontractor's readiness certification memorandum and implementation plan and forward to K-H Operational Organization Vice President for endorsement. (FDPM, 6.3.1.2)			
5. Conduct in-process characterization activities in accordance with Appendix B of the D&D Characterization Protocol. (FDPM, 6.3.3.1)			
6. Develop pre-demolition survey package in accordance with the Site-wide Pre-Demolition Survey Plan.			
7. Conduct pre-demolition survey in accordance with reconnaissance level characterization package.			
8. Prepare Pre-Demolition Survey Report in accordance with the Site-Wide Pre-Demolition Survey Plan and have reviewed in accordance with document review matrix. (FDPM, 6.3.3.2)			
9. Submit Pre-Demolition Survey Report to DOE for review and approval.			
10. After LRA review and concurrence, place Pre-Demolition Survey Report and concurrence letter in the administrative record file.			
11. Review Demolition Plan prepared by subcontractor.			
12. Notify the Site Waste Management Organization of the estimated project waste generation, by category. (FDPM, 2.3.5)			
13. Update the Waste Management Plan to reflect significant changes in generation rates. (FDPM, 2.3.5)			
14. Prepare Construction Work in Progress Reports monthly during demolition activities. (FDPM, 6.3.6)			
15. Prepare procurement report. (FDPM, 6.3.6)			
16. Ensure that the construction manager prepares daily construction reports from the notice to proceed until project close-out and distributes to project team members at the close of each business day. (FDPM, 6.3.6)			
17. Ensure that the construction manager prepare monthly man-hour report and submits these report the fifth working day of the month. (FDPM, 6.3.6)			

77

PROJECT EXECUTION CHECKLIST			
Project:	Project Manager:		
Activity	Exemption from D&D Division Manager	Date Completed	Signature
18. Ensure that photographs are taken of all project progress. (FDPM, 6.3.6)			
19. Review Demolition Closure Report prepared by subcontractor and submit to D&D Division Manager and place in AR file. (FDPM, 6.3.4)			

Checklist Complete:

Kaiser-Hill Project Manager (print/sign)

Date

Approval to proceed to Project Close-out:

Kaiser-Hill D&D Division Manager (print/sign)

Date

7.0 PROJECT CLOSE-OUT

The purpose of this chapter is to present the requirements and guidance for performing activities in the project close-out phase of the project which follow completion of work execution and transition to ER. Preparation for the closeout of all projects begins in the planning phase with definition of project specific acceptance and closeout criteria included in the PEP and the identification and subsequent development of other planning and work control documents.

In the closing-out of the project, there are several activities that take place. These include the generation and/or closeout of:

- Partial And Complete Subcontract Close-Out Form (*Appendix F-1*)
- Project Beneficial Occupancy Notice (*Appendix F-2*)
- Project Acceptance And Transfer Form (*Appendix F-3*)
- Suggested Subcontractor Performance Evaluation (*Appendix D-2*)
- Project Final Closeout Form (FPCO) (*Appendix F-4*)
- Project Lessons Learned Report
- Final Facility Disposition Decommissioning Closeout Report
- IWCP, including all Engineering documentation and associated work control forms, e.g., Radiological Work Permits, excavation work permits, hot work permits, etc.

Appendix C provide more details and discussion on the types of reports typically generated during the project and which ones *may* need to be closed out. Appendix A-1, the Generic D&D Project File Index and Completion Checklist provides the mechanism to identify what documents were generated and need to be collected and closed-out for the specific project.

Note: As part of Close-out actions, it is important to ensure that the Administrative Record is complete.

7.1 OVERVIEW

Preparation for the acceptance and closeout of all projects begins in the planning phase with definition of project specific acceptance and closeout criteria included in the PEP. The acceptance and closeout criteria **SHALL** define project specific tasks, tests, inspections, approvals, and other documentation necessary for project completion, acceptance, and transfer.

The PM **SHALL** ensure that all project records are complete, current, and retained in a manner that ensures the files can be assembled and provided to the records management organization for proper storage, following project completion. The official and permanent project file **SHALL** be established and maintained by the PM and **SHALL** meet the criteria established during the initial scoping phase in the joint scoping meeting.

All records acquired or generated by the decommissioning project shall be dispositioned in accordance with procedure 1-V41-RM-001 *Records Management Guidance for Records Sources*. Electronic Systems shall be dispositioned in accordance with procedure PRO-447-ERM-001 *Electronic Information System Inventory and Retirement Form*. The project files **SHALL** be organized and maintained in accordance with the PEP, the Generic D&D Project File Index and Project Deliverables Matrix provided in Appendices A-1 and A-2, respectively.

Once Close-out Phase is initiated, the PM **SHALL** use the Close-out Phase checklist to track the completion of the requirements outlined in this section. The Close-out Phase checklist **SHALL** be completed and signed by the PM and the D&D Division Manager prior to project completion. The Close-out checklist is located at the end of this Section.

7.2 PROCESS LOGIC FLOW

The activities involved in the project execution phase are shown in the process logic flow diagram in Figure 7-1.

7.3 REQUIREMENTS

7.3.1 PROJECT DOCUMENTATION

Facility disposition projects and construction projects are documented, tracked, and reported in compliance with all applicable Site requirements. Project controls are established to ensure documentation continuity, integration, and consistency. Individual documentation requirements and control criteria are established and defined within the PEP on a graded approach by each project. Specific documents that may be required for facility disposition and construction projects are provided in Appendix A-2. These documents should be reviewed and approved in accordance with the D&D Document Review Matrix in Appendix A-3. In-process document control is discussed in Section 2.

Applicable project acceptance and close-out documentation for all facility disposition projects and construction projects **SHALL** be prepared, approved, and retained in the permanent project file by the PM. Appendices C and F provide examples and templates of the various project acceptance and closeout documentation.

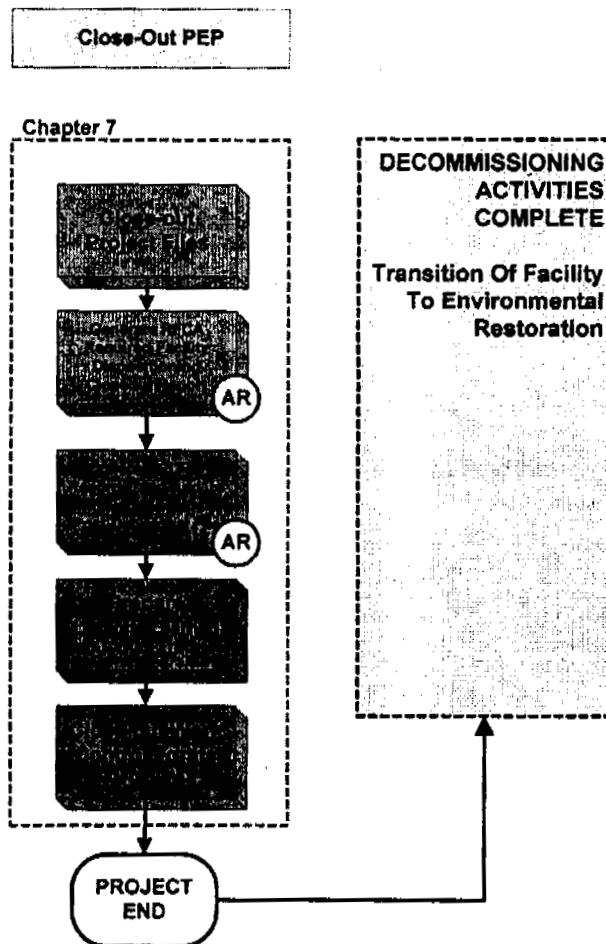
Project close-out tasks are completed as applicable for projects that are canceled prior to completion of the full scope or work. Execution of project close-out, including acceptance testing and final documentation **SHALL** be budgeted, scheduled, and managed as a specific project activity.

7.3.2 PROJECT FILES

For all facility disposition projects and construction projects, an official and permanent project file **SHALL** be established and maintained by the PM at project initiation. The project file **SHALL** be properly identified, protected, transmitted, distributed, retained, retrieved, maintained, and dispositioned per the Site's Document Control requirements. Subcontractors *may* choose to develop their own project documentation infrastructure, e.g. procedures or desk instructions, or they *may* use the approved K-H documentation control infrastructure. If a subcontractor chooses to develop their own project documentation infrastructure for facility disposition or assigned construction projects, it **SHALL** conform to the requirements of this manual and be approved by the D&D Division Manager, or designee, in writing.

80

Figure 7-1
PROJECT CLOSE-OUT
PROCESS FLOW DIAGRAM



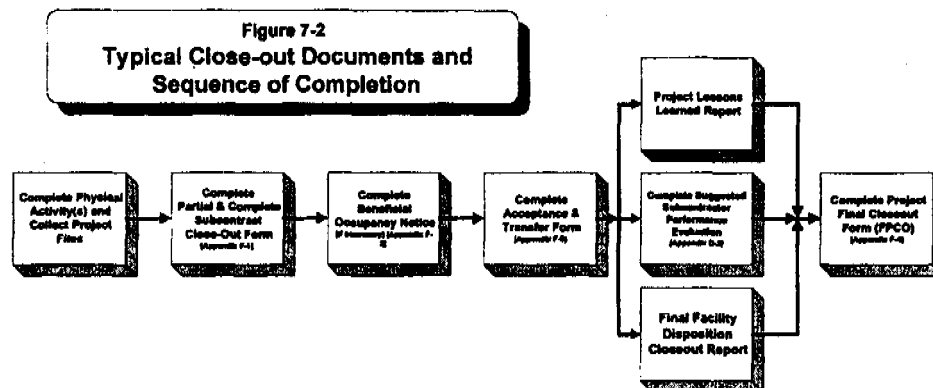
The PM **SHALL** ensure that all project records are complete, current, retained, accepted, and closed out in a manner that meets Site document control requirements. Project files are subject to review and assessment by K-H and DOE at any time. For each project, specific acceptance and close-out activities and documentation **SHALL** be defined and executed to ensure acceptable completion of the work scope, complete and auditable documentation, and complete subcontract and financial closure.

Appendix A-1 provides a project file numbering system that standardizes the method used to help organize and maintain project files and records.

7.3.3 FINAL PROJECT CLOSEOUT REPORTS AND DOCUMENTATION

Figure 7-2 provides an overview of the sequence of project closeout documentation. For facility disposition and/or construction projects, the following **SHALL** be completed as part of final project close-out:

- Partial And Complete Subcontract Close-Out Form (*Appendix F-1*)
- Project Beneficial Occupancy Notice (*Appendix F-2*)
- Project Acceptance And Transfer Form (*Appendix F-3*)
- Suggested Subcontractor Performance Evaluation (*Appendix D-2*)
- Project Final Closeout Form (FPCO) (*Appendix F-5*)
- Project Lessons Learned Report
- Final Facility Disposition Closeout Report



7.3.3.1 Partial/Complete Subcontract Closeout Report

The Partial/Complete Subcontract Closeout documentation provides for the partial or complete "financial" close-out of a task or the project. It provides a mechanism for allowing disbursement of funds for partial or fully completed tasks. An example of the Partial/Complete Subcontract Closeout documentation is shown in Appendix F-1.

7.3.3.2 Beneficial Occupancy Notice (BON)

The BON document is used to certify that the facility is serviceable for its intended use and is, therefore, "substantially complete". It allows for occupation of the facility, however, there may be some restrictions. Any restrictions are to be identified and placed in writing. Accompanying the BON must be a punch list of remaining activities to be completed, a schedule for completion, and a cost estimate to complete the punch list. See Appendix F-2.

82

7.3.3.3 Project Acceptance and Transfer (PA&T)

Following completion of all activities, including any punchlist items and final inspection of the project, the PA&T associated with the contract plans and specifications, are verified complete and in compliance to the documents. The system, facility, etc., is accepted and transferred, as appropriate, to the new landlord/owner. An example of the PA&T is provided in Appendix F-3. To obtain the current PA&T form the project should go to Construction Closeout, 17C-COEM-CMG-417.

7.3.3.4 Suggested Subcontractor Performance Evaluation

An evaluation of the Subcontractor's performance is performed at the completion of the project. The purpose of this evaluation process is to determine the suitability of the general Subcontractor or lower tier Subcontractor for future contracts. It is recommended that the Suggested Subcontractor Performance Evaluation model shown in Appendix D-2 be used to evaluate subcontractor/vendor performance. The Suggested Subcontractor Performance Evaluation **SHALL** be distributed to the project file, K-H Procurement, K-H Procurement Quality Assurance, and to other interested Site organizations as appropriate and upon request. The suggested Subcontractor Performance Evaluation is provided in Appendix D-2.

7.3.3.5 Final Project Closeout Form (FPCO)

An example of the FPCO is provided in Appendix F-4. The FPCO is used to verify the following:

- Subcontractors redline drawings are complete and in accordance with the designed scope of work and include all approved filed charges. Red-lined drawings have been received from the sub-contractor.
- All applicable subcontracts have been accepted as complete, the design and construction management files have been consolidated into the project files and indexed in accordance with the Project File Index/Records Checklist, and a lessons learned letter has been provided to the Closeout Manager for reference on future similar projects, if applicable.
- Ownership of equipment, systems, structures, and components have been transferred to the permanent property custodian, and the project files are ready to be archived.

7.3.3.6 Lessons Learned Report

At completion of a facility disposition or construction project, the PM **SHALL** prepare, and submit for record, a Project Lessons Learned Summary Report. Lessons learned include; 1) a good practice or innovative approach that is captured and shared to promote repeat application, or 2) an adverse work practice or experience that is captured and shared to avoid recurrence. To determine if lessons learned should be shared, consider the potential for this deficiency, event, adverse condition or safety issue to exist in, or to affect other buildings, operations, activities or organizations. If the potential exists, the lessons should be shared.

7.3.3.7 Decommissioning Final Closeout Report and Documentation

A Decommissioning Closeout Report will be prepared for all decommissioning actions when work and relevant final characterization is completed. The report will consist of a brief description of the work that was completed, including: 1) any modifications to the original

decision document; 2) final sampling and analysis report(s); 3) a description of the quantity of remediation and process wastes produced and; 4) a statement, if true, that there were no releases to the environment due to the execution of the project or, if not true, description of the release and the response taken.

The report will state whether, as of the date of the closeout report, the accelerated work is complete. The complexity of the Decommissioning Closeout Report and the level of detail will reflect the scope and duration of the action. An example outline is shown below:

- Introduction
- Action description, document project activities
- Verification that action goals were met
- Verification of treatment process (if applicable)
- Radiological analysis (if applicable)
- Demolition survey results
- Waste stream disposition
- Deviations from the decision document
- Description of site condition at the end of decommissioning (e.g., slab, basement, etc.)
- Demarcation of excavation (if applicable)
- Demarcation of wastes left in place
- Dates and duration of specific activities (approximate)
- Final disposition of wastes (actual or anticipated)
- Next steps for the area (e.g., decommissioning is complete; facility demolished or ready for reuse; interim monitoring, if required; or transferred to ER Program for any additional action, if required).

A decommissioning closeout report will be prepared for all building decommissioning projects. Only the decommissioning closeout reports for Type 2 and 3 building decommissioning projects will be submitted to the agencies. The DPP requires that upon completion of the relevant final characterization (final status survey), DOE will notify CDPHE, EPA and the public in writing of the completion of decommissioning for a building or group of buildings. DOE will accomplish notification to the public with a letter to the Rocky Flats Citizen Advisory Board. This requirement may be achieved by providing the Rocky Flats Citizens Advisory Board with a copy of the Closeout Report transmittal letter which is provided to the appropriate agencies.

PROJECT CLOSE-OUT CHECKLIST			
Project:		Project Manager:	
Activity	Exemption from D&D Division Manager	Date Completed	Signature
1. Complete File Index Completion Checklist. (FDPM, 7.3.2)			
2. Complete Partial/Complete Subcontract Closeout Report. (FDPM, 7.3.3.1)			
3. Complete Beneficial Occupancy Notice. (FDPM, 7.3.3.2)			
4. Complete Project Acceptance and Transfer. (FDPM, 7.3.3.3)			
5. Complete subcontractor's performance evaluation. (FDPM, 7.3.3.4)			
6. Complete final project closeout form. (FDPM, 7.3.3.5)			
7. Complete lessons learned report. (FDPM, 7.3.3.6)			
8. Prepare Decommissioning final closeout report and documentation and have it review in accordance with the document review matrix in Appendix A-3 of the FDPM. (FDPM, 7.3.3.7)			

Checklist Complete:

Kaiser-Hill Project Manager (print/sign)

Date

Approval of Project Close-out:

Kaiser-Hill D&D Division Manager (print/sign)

Date

8.0 REFERENCES

CERCLA Administrative Records Program, 1-F78-ER-ARP-001
CERCLA Comprehensive Environmental Responsibility Compensation and Liability Act
Closure Project Baseline
Colorado Air Quality Control Commission Reg. 8, Control of Hazardous Air Pollutants, SCCR-1001-10
Colorado Hazardous Waste Act (CHWA)
Conduct of Operations Manual, MAN-066-COOP
Construction Closeout, 17C-COEM-CMG-417
Correspondence Control Program, 1-11000-ADM-003
Davis-Bacon Process, 1-90000-ADM-9.05
Decommissioning Program Plan (DPP) (dated October 8, 1998 and approved November 12, 1998)
Decontamination and Decommissioning Characterization Protocol Manual, MAN-077-DDCP
Hazard Baseline Documentation, DOE-EM-STD-5502-94
Hazard Categorization and Accident Analysis Techniques, DOE-STD-1027-92
Hazardous Waste Operations and Emergency Response, 29 CFR 1910.120
Hazardous Waste Requirements Manual, 1-10000 HWR
Health and Safety Practices Manual
Independent Review Committee, 1-52000-ADM-02.01
Integrated Safety Management System Manual, 1-MAN-016-ISM
Integrated Work Control Program Manual, MAN-071-IWCP
Low Level Waste Management Plan, 94-RWP/EWQA-0014
Multi-Agency Radiation Survey and Site Investigation Manual (MARSSIM) Guidelines
Nuclear Safety Analysis Reports, DOE Order 5480.23
Nuclear Safety Manual, 1-MAN-018-NSM
Occupational Radiation Protection, 10 CFR 835
Occupational Safety and Industrial Hygiene Program Manual, MAN-072-OS&IH PM
Property Management Manual (PMM), 1-MAN-009-PMM
Radiological Control Manual (Site RCM)
Readiness Determination Manual, 1-MAN-04-RDM
Records Management Guidance for Records Sources, 1-V41-RM-001
Real Property Transition Procedure, 1-PRO-209-RPTP
Resource Conservation and Recovery Act (RCRA)
Rocky Flats Cleanup Agreement (RFCA), July 19, 1996
Rocky Flats Dictionary
Safety Analysis and Risk Assessment Handbook (SARAH), NSTR-RFP-5098
Safety Evaluation Screen, 1-C10-NSM-04.03
Site Engineering Requirements Manual, MAN-027-SERM
Site Lessons Learned Generic Implications Requirements Manual, 1-MAN-017-LLGI-RM
Site Quality Assurance Program (SQAP)
SSOC Unreviewed Safety Question Process, 3-X97-SSOC-USPQ1
Training Users Manual, 96-RF/T&Q-003
Transportation Manual
Transuranic (TRU) Waste Management Manual, 1-MAN-008-WM-001
TSCA Management Plan
Unreviewed Safety Question Determination, 1-C11-NSM-04.05

Appendix A

- A-1 Generic DD Projects File Index and Completion Checklist
- A-2 Project Deliverables Matrix
- A-3 D&D Document Review

Appendix B

- B-1 Type 1 Facility Disposition Checklist
- B-2 Listing of Facilities by "Anticipated" Type

Appendix C

- C-1 Project Execution Plan (PEP) Template
- C-2 Waste Management Plan Format
- C-3 Daily Construction Report
- C-4 Monthly Personnel Resource Usage Report
- C-5 Construction Progress Photographs

Appendix D

- D-1 Statement of Work
- D-2 Instructions for Construction Subcontractor Pool Application and Application for Pre-Qualification, Subcontractor Evaluation
- D-3 Decision Document Guidance
- D-4 Decision Document Template

Appendix E

- E-1 Core Training Requirements D&D Worker

Appendix F

- F-1 Partial And Complete Subcontract Close-Out Form
- F-2 Project Beneficial Occupancy Notice
- F-3 Project Acceptance And Transfer Form
- F-4 Project Final Closeout Form (FPCO)

Appendix G

- G Glossary & Acronyms